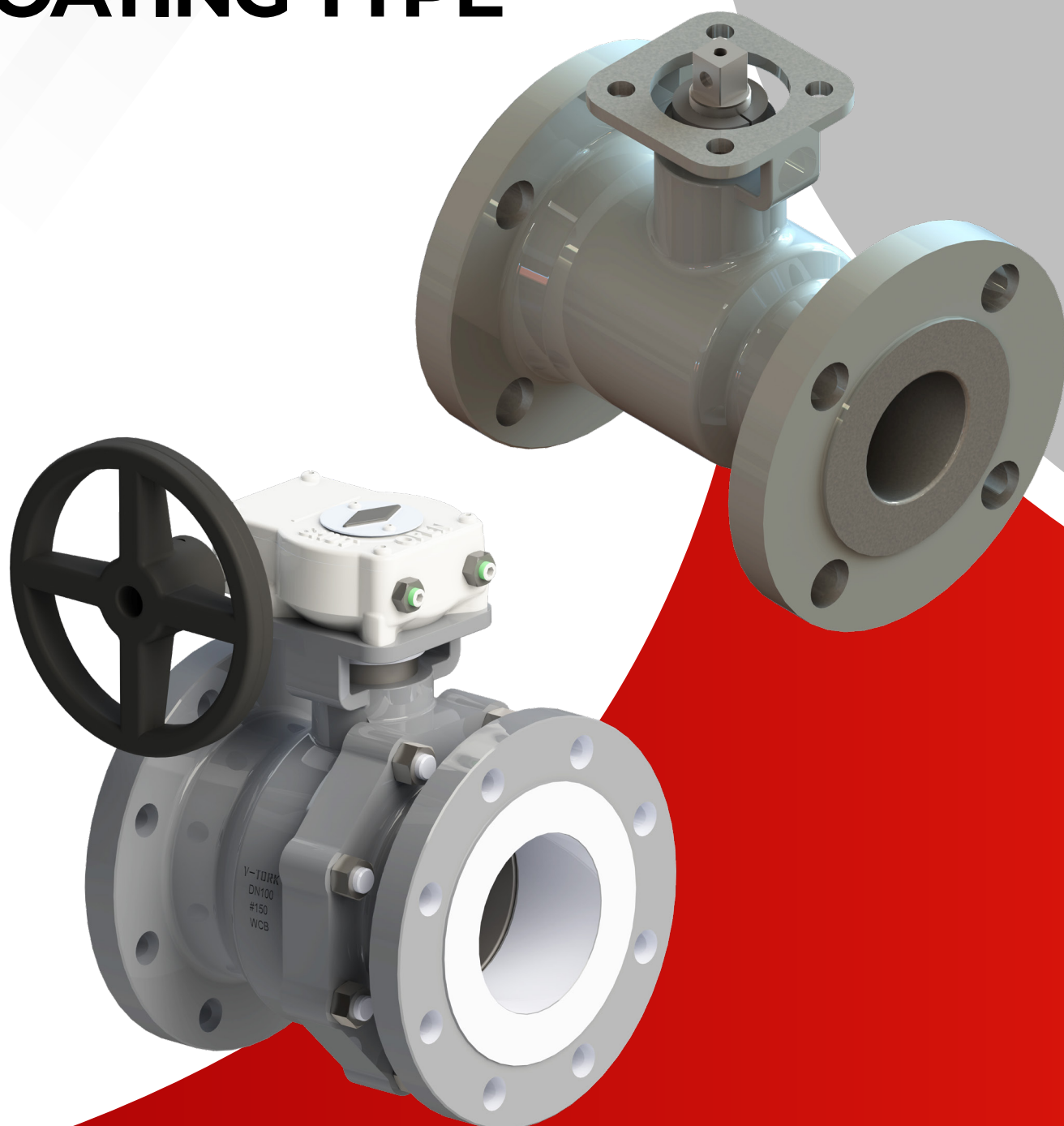




# **BALL VALVES**

## **FLOATING TYPE**



# ABOUT US

The V-Tork Controls story began in 2008, driven by a vision to provide critical flow control solutions. Headquartered in Coimbatore, India, a recognized engineering hub, we leverage state-of-the-art infrastructure and a team of dedicated professionals to deliver exceptional valve products and services.

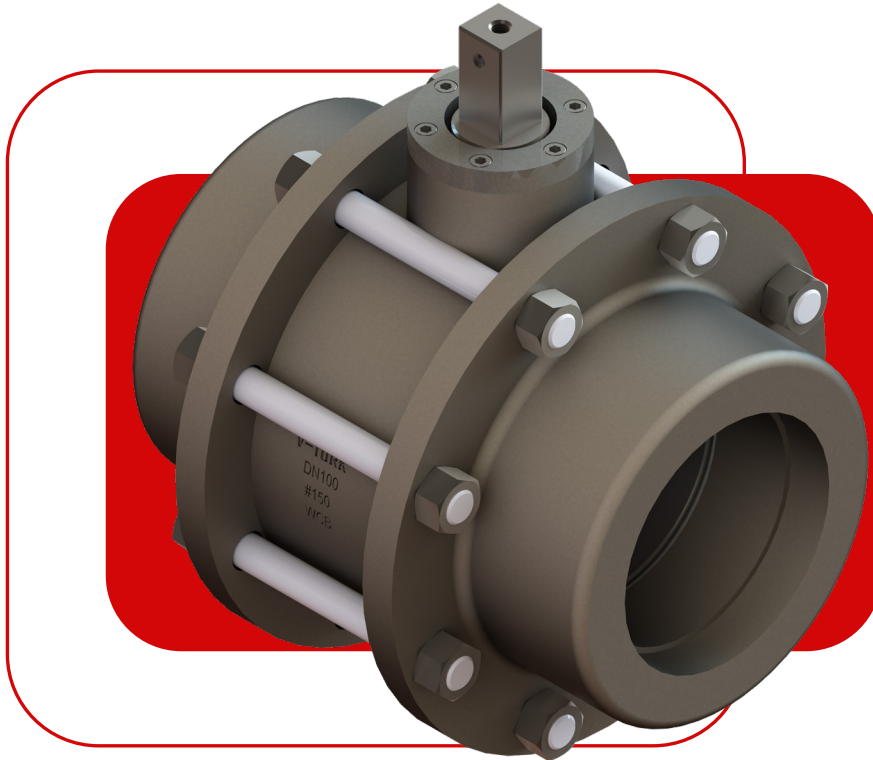
At V-Tork Controls, you'll find a combination of cutting-edge technology, unwavering dedication, and a relentless pursuit of excellence. We empower your flow control needs.



Our passion lies in exceeding expectations. We are a leading manufacturer of Knife Gate Valves, Ball valves, Butterfly valves, Pinch Valves & specialise in customised valve solutions tailored to your specific needs. With over 16 years of experience, we understand the diverse challenges faced in various industrial applications. Our commitment extends beyond manufacturing; we strive to maximise customer satisfaction by offering innovative and proven solutions that deliver reliable performance in real-world use.

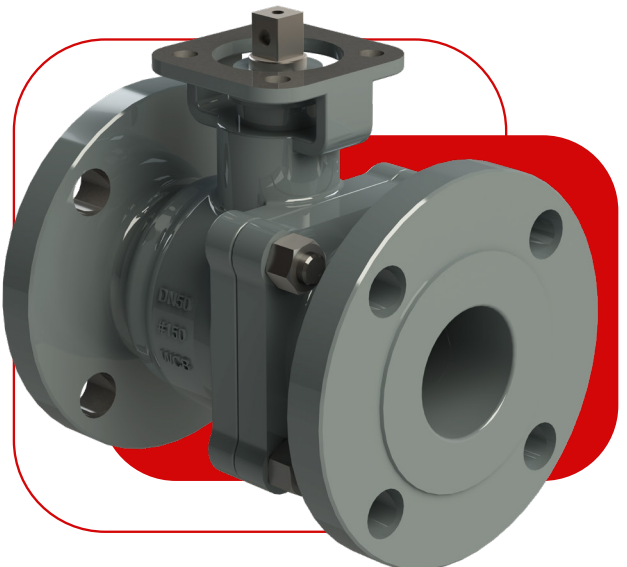
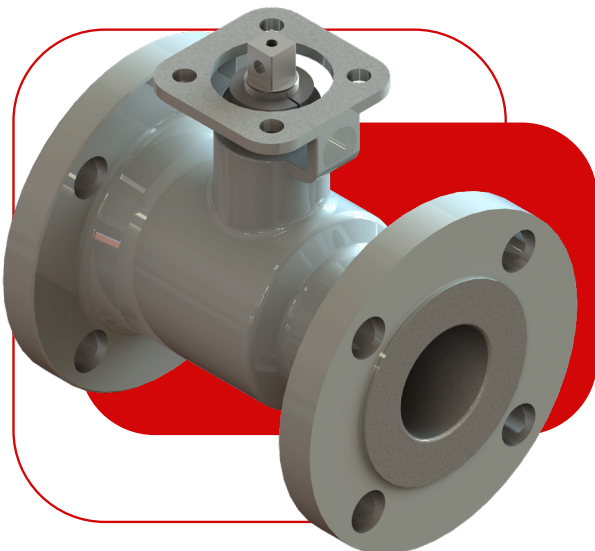
## S SERIES BALL VALVE (SOCKET END / SCREWED END)

The V-Tork S-Series Ball Valve is a floating type valve available with screwed-end and socket-weld end connections.



## F-SERIES BALL VALVES (FLANGED END)

The V-Tork F-Series Ball Valve comes with flanged end connections, offering easy integration into pipeline systems.



# S SERIES BALL VALVES (SOCKET WELD AND SCREWED END)

## SINGLE/TWO/THREE PIECE

### QUALITY & PERFORMANCE

V-Tork provides a wide range of quality products and reliability. S Series Floating Ball Side Entry Valves are manufactured in ISO 9001 certified facilities with QMS system and according to ASME B16.34, API 6D and BS EN ISO 17292.

### Design and its Features

#### 01. ISO Top Flange Drilling

Integral Top flange is designed with ISO 5211 for direct mounting of actuators and gear operators. And it provides easy access for adjustment of gland bolts when mounted with actuators.

#### 02. Packing Gland

Packing gland bolts are easily accessible to adjust packing the actuator in place.

#### 03. Valve Body

Flanged, two-piece design in cast construction, flanges are raised face and serrated dimensions confirm to ASME B16.5. Carbon steel valve bodies are finished with two coats of hard, zinc-rich epoxy excellent corrosion resistance

#### 04. Seat

Seat is contoured to ensure that all stress due to the line pressure are counter balanced and that the extrusion of the seat into the body cavity due to sealing is eliminated.

#### 05. Ball

- ▶ Floating design is precision machined ball with superior finish and sphericity ensures extended seat life and low operating torques.
- ▶ The combination of the balanced seat design and ball ensures consistent and dependable leak tightness.

#### 06. Stem

Available in a range of materials, such as carbon steel, stainless steel, and alloy steel, ensuring durability and resistance to corrosion in harsh conditions.

#### 07. Stem Seal

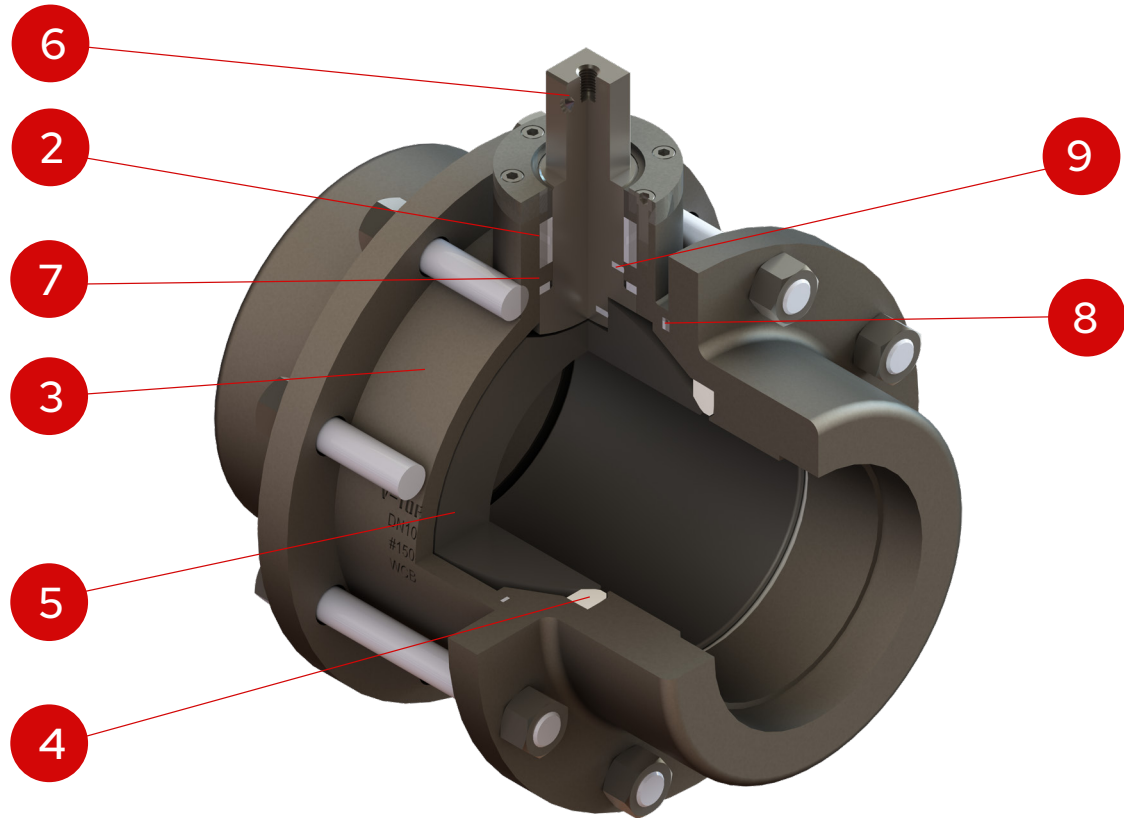
Heavy duty engineered seal is provided to absorb side and thrust loads. It also reduces stem torques and protects stem packing from deformation and gives extended stem sealing life.

#### 08. Body Seal

Body joint sealing is by graphite/reinforced graphite gasket to withstand high temperatures and is contained in a precision machined groove for extended sealing life.

## 09. Antistatic Device

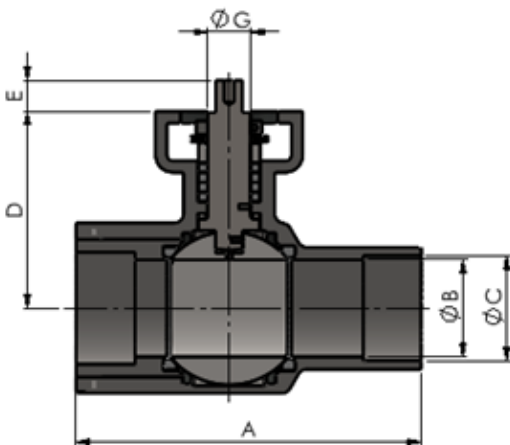
- ▶ Static electricity builds up inside a valve when the ball rubs against the non-metallic seats.
- ▶ V-Tork floating ball valves have inbuilt antistatic mechanism to provide electrical continuity which eliminates the possibility of hazard.
- ▶ Antistatic devices at the ball-stem interface and body stem interface.



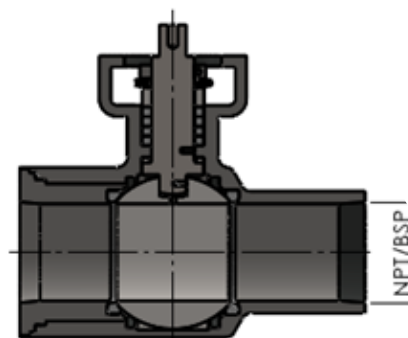
Available in a range of materials, such as carbon steel, stainless steel, and alloy steel, ensuring durability and resistance to corrosion in harsh conditions.

## S SERIES - SINGLE PIECE DESIGN

(SOCKET WELD AND SCREWED END) SIZE: 1/2" - 2"



**SOCKET WELD**



**SCREWED END**



## ASME CLASS #800

| Size   | A   | ØB | ØC/SW | NPT/BSP | TOP FLANGE DETAILS |          |      | D   | E  | F    | ØG | Weight in Kg (Approx.) |
|--------|-----|----|-------|---------|--------------------|----------|------|-----|----|------|----|------------------------|
|        |     |    |       |         | PCD                | HOLE DIA | Nos. |     |    |      |    |                        |
| 1/2"   | 72  | 15 | 1/2"  | 1/2"    | 42                 | 6        | 4    | 46  | 11 | 8.5  | 13 | 1.5                    |
| 3/4"   | 90  | 15 | 3/4"  | 3/4"    | 50                 | 7        | 4    | 52  | 11 | 8.5  | 13 | 2.5                    |
| 1"     | 95  | 20 | 1"    | 1"      | 70                 | 8.5      | 4    | 60  | 11 | 16.7 | 13 | 4                      |
| 1 1/2" | 130 | 28 | 1.5"  | 1.5"    | 102                | 11       | 4    | 74  | 11 | 11   | 19 | 6.5                    |
| 2"     | 140 | 36 | 2"    | 2"      | 125                | 13       | 4    | 102 | 16 | 14   | 22 | 8.5                    |

## ASME CLASS #1500

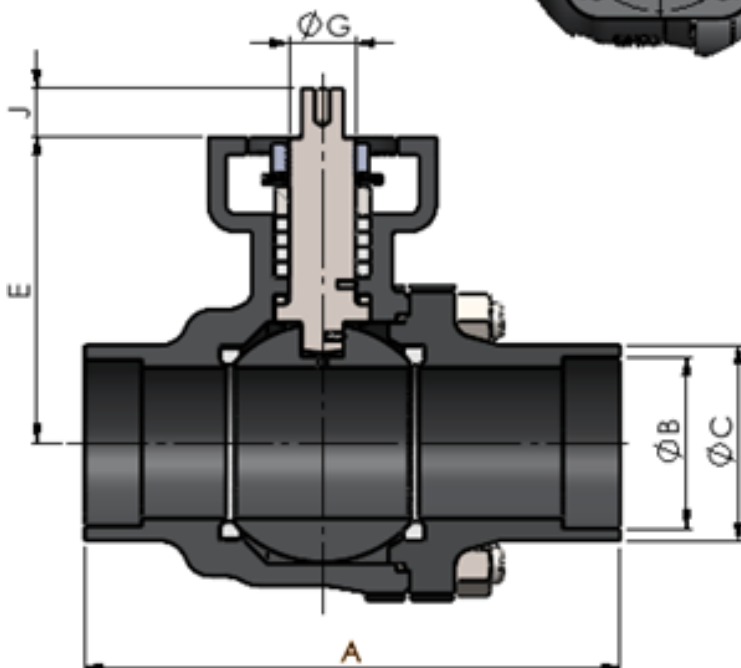
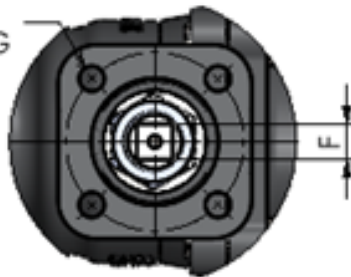
| Size   | A   | ØB | ØC/SW | NPT/BSP | TOP FLANGE DETAILS |          |      | D   | E  | F    | ØG | Weight in Kg (Approx.) |
|--------|-----|----|-------|---------|--------------------|----------|------|-----|----|------|----|------------------------|
|        |     |    |       |         | PCD                | HOLE DIA | Nos. |     |    |      |    |                        |
| 1/2"   | 90  | 15 | 1/2"  | 1/2"    | 42                 | 6        | 4    | 46  | 11 | 8.5  | 13 | 2                      |
| 3/4"   | 110 | 15 | 3/4"  | 3/4"    | 50                 | 7        | 4    | 52  | 11 | 8.5  | 13 | 2.8                    |
| 1"     | 120 | 20 | 1"    | 1"      | 70                 | 8.5      | 4    | 60  | 11 | 16.7 | 13 | 4.6                    |
| 1 1/2" | 150 | 28 | 1.5"  | 1.5"    | 102                | 11       | 4    | 74  | 11 | 11   | 19 | 7.2                    |
| 2"     | 180 | 36 | 2"    | 2"      | 125                | 13       | 4    | 102 | 16 | 14   | 22 | 9.2                    |

## S SERIES - TWO PIECE DESIGN

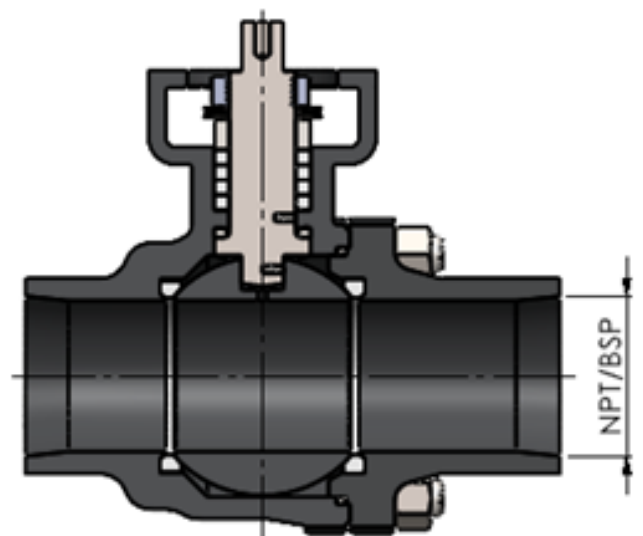
(SOCKET WELD AND SCREWED END)

SIZE: 1/2" - 2"

REFER THE TABLE FOR  
TOP FLANGE DRILLING



SOCKET WELD (SW)



SCREWD END (SE)

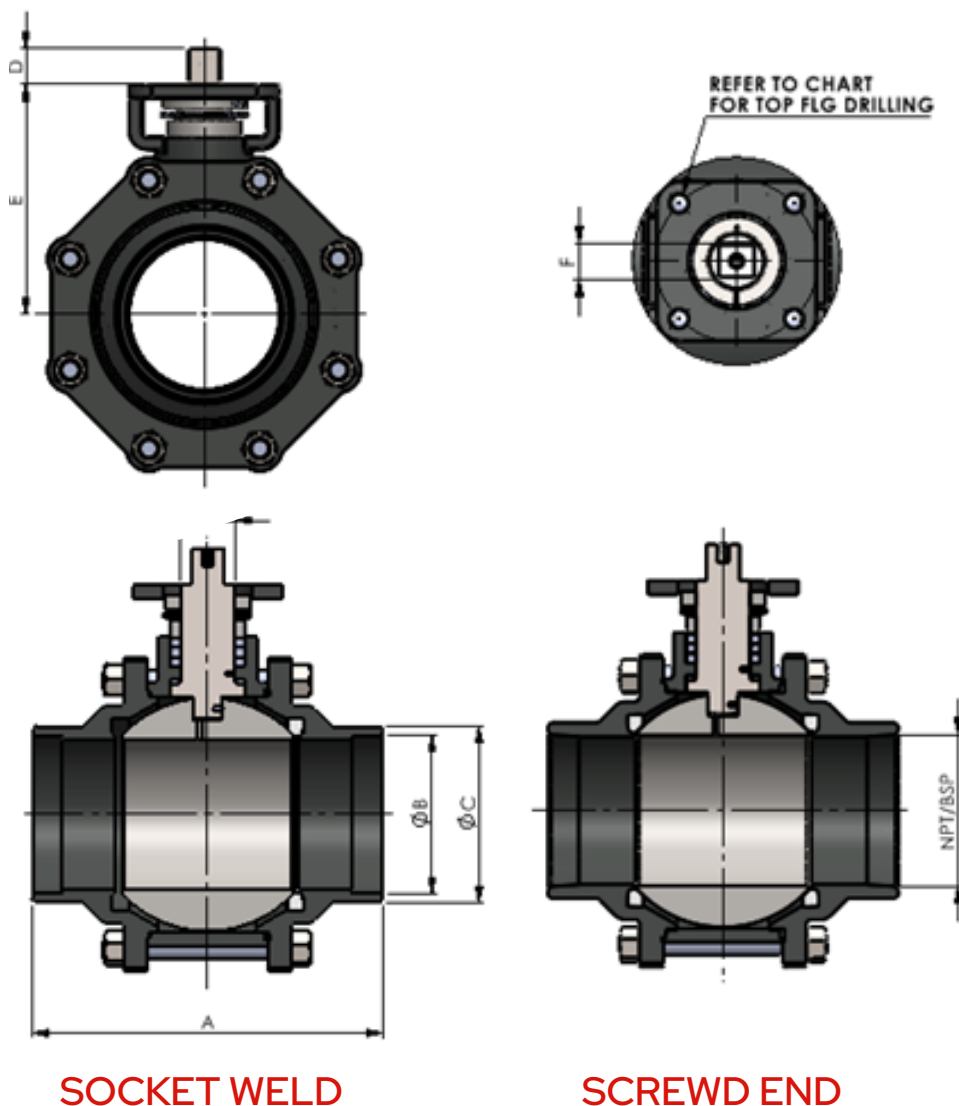
## ASME CLASS #800(S SERIES)

| Valve Size |    | A(SW<br>/SE) | ØB | ØC | E   | ØG | F  | J  | Top Flange Drilling |     |        |      | App<br>Weight<br>(Kg) |
|------------|----|--------------|----|----|-----|----|----|----|---------------------|-----|--------|------|-----------------------|
| Inch       | DN |              |    |    |     |    |    |    | ISO 5211            | PCD | Hole Ø | Nos. |                       |
| 1/2"       | 15 | 1102.8       | 15 | 21 | 46  | 12 | 10 | 11 | F05                 | 50  | 7      | 4    | 2.6                   |
| 3/4"       | 20 | 107.9        | 20 | 27 | 52  | 12 | 10 | 11 | F05                 | 50  | 7      | 4    | 3.5                   |
| 1"         | 25 | 115          | 25 | 34 | 61  | 13 | 10 | 11 | F05                 | 50  | 7      | 4    | 4.8                   |
| 1 1/2"     | 40 | 134          | 40 | 49 | 74  | 14 | 12 | 14 | F05                 | 50  | 7      | 4    | 6.6                   |
| 2"         | 50 | 157.9        | 50 | 59 | 101 | 22 | 16 | 14 | F07                 | 70  | 10     | 4    | 9.5                   |

## S SERIES - THREE PIECE DESIGN

(SOCKET WELD AND SCREWED END)

DIMENSIONS AND WEIGHTS: (S SERIES) SIZE: 1/2" - 2"



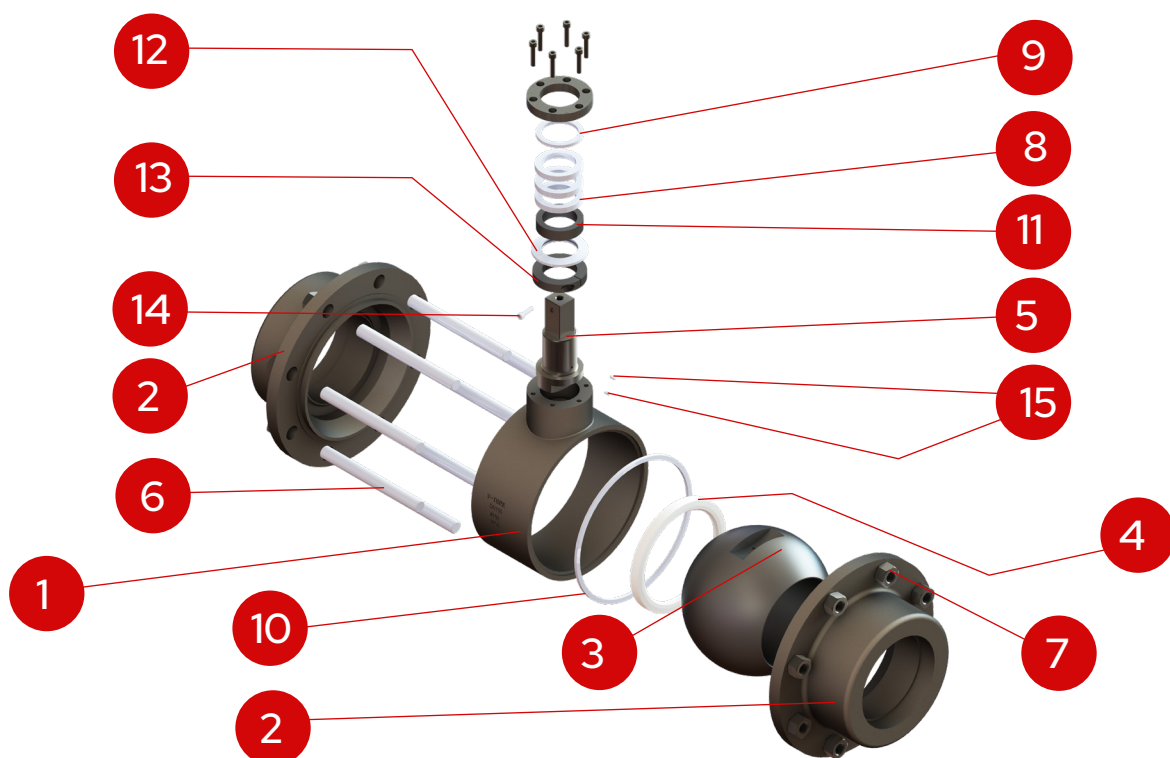
## ASME CLASS #800

| Valve Size |    | A     | ØB | ØC   | D  | E   | F  | ØB | BSP /NPT | Top Flange Drilling |     |        |      | App Weight (Kg) |
|------------|----|-------|----|------|----|-----|----|----|----------|---------------------|-----|--------|------|-----------------|
| Inch       | DN |       |    |      |    |     |    |    |          | ISO 5211            | PCD | Hole Ø | Nos. |                 |
| 1/2"       | 15 | 72    | 14 | 23.5 | 11 | 46  | 10 | 11 | 1/2"-14  | F05                 | 50  | 7      | 4    | 2               |
| 3/4"       | 20 | 94    | 20 | 31   | 11 | 52  | 10 | 13 | 3/4"-14  | F05                 | 50  | 7      | 4    | 2.3             |
| 1"         | 25 | 106   | 25 | 35   | 11 | 65  | 10 | 13 | 1"-11    | F05                 | 50  | 7      | 4    | 4               |
| 1 1/2"     | 40 | 125.5 | 38 | 52   | 14 | 88  | 15 | 19 | 1 1/2"-4 | F05                 | 50  | 7      | 4    | 8.2             |
| 2"         | 50 | 128   | 51 | 65   | 14 | 116 | 18 | 22 | 2"-11    | F07                 | 70  | 10     | 4    | 12.5            |

## ASME CLASS #1500

| Valve Size |    | A   | ØB | ØC   | D  | E   | F  | ØB | BSP /NPT | Top Flange Drilling |     |        |      | App Weight (Kg) |
|------------|----|-----|----|------|----|-----|----|----|----------|---------------------|-----|--------|------|-----------------|
| Inch       | DN |     |    |      |    |     |    |    |          | ISO 5211            | PCD | Hole Ø | Nos. |                 |
| 1/2"       | 15 | 104 | 14 | 23.5 | 11 | 46  | 10 | 11 | 1/2"-14  | F05                 | 50  | 7      | 4    | 2.5             |
| 3/4"       | 20 | 127 | 20 | 31   | 11 | 52  | 10 | 13 | 3/4"-14  | F05                 | 50  | 7      | 4    | 3.1             |
| 1"         | 25 | 134 | 25 | 35   | 11 | 65  | 10 | 13 | 1"-11    | F05                 | 50  | 7      | 4    | 5.2             |
| 1 1/2"     | 40 | 200 | 38 | 52   | 14 | 88  | 15 | 19 | 1 1/2"-4 | F05                 | 50  | 7      | 4    | 9.0             |
| 2"         | 50 | 222 | 51 | 65   | 14 | 116 | 18 | 22 | 2"-11    | F07                 | 70  | 10     | 4    | 13.6            |

## MATERIAL OF CONSTRUCTION



## LIST OF PARTS

| Item No# | Description                      | Material                                                   |
|----------|----------------------------------|------------------------------------------------------------|
| 1        | Body                             | Carbon Steel, Stainless Steel, Duplex Steel, Forged Steel. |
| 2        | End Connector                    | Carbon Steel, Stainless Steel, Duplex Steel, Forged Steel. |
| 3        | Ball                             | Carbon Steel, Stainless Steel, Duplex Steel                |
| 4        | **Seat                           | PTFE/RPTFE/PEEK                                            |
| 5        | Stem                             | Stainless Steel                                            |
| 6        | Studs                            | ASTM A193 B7                                               |
| 7        | Nuts                             | ASTM A194 2H                                               |
| 8        | **Stem Seal                      | RPTFE                                                      |
| 9        | **Stem Washer                    | RPTFE                                                      |
| 10       | **Body Seal                      | PTFE                                                       |
| 11       | Gland                            | ASTM A479 SS304                                            |
| 12       | Disc Spring                      | EN 51 CRV4                                                 |
| 13       | Gland Nut                        | ASTM A479 SS410                                            |
| 14       | Gland Nut Screw                  | ISO 3506 A2-70                                             |
| 15       | Antistatic Device (Plunger Ball) | SS316                                                      |
| 15       | Antistatic Device (Plunger Ball) | SS316                                                      |

**\*\* Recommended Spare Parts**

## BODY/END CONNECTOR/BALL:

**Carbon steel:** WCB, WCC, LCB, LCC

**Stainless Steel:** CF3M, CF8M, CF3, CF8

**Duplex Steel:** F51, A995 5A

**Forged Steel:** A105, A182 Gr. F304, A182 Gr. F316

# F SERIES BALL VALVES (FLANGED END)

## SINGLE PIECE DESIGN (REDUCED PORT)

### STANDARD FEATURES

#### Quality & Performance

V-Tork Controls provides a wide range of quality products with the reliability you can count on. Our designs are based on industry requirements and our customers' feedback. All Series 75/76 ball valves are manufactured in ISO 9001 certified facilities with a robust quality management system and in conformance to ASME BI 6.34 and API 608 specifications.

#### Design Features

##### 01. Valve Body

One-piece body, flanged end valves are designed meet or exceed today's abrasive and corrosive applications.

##### 02. ISO Top Flange

Top Plate drilled to ISO 5211 bolt circle dimensions.

##### 03. Solid, One-Piece Ball

Floating design, precision machined ball with superior finish and sphericity ensures extended at life and low operating torques. Ball includes pressure equalization hole to prevent trapped pressure in body cavity in open position. Hex Nut

##### 04. Stem

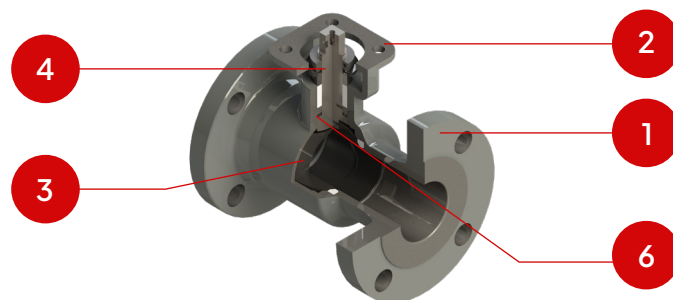
Stem in stainless steel, heavy-duty construction Protector with double "D" configuration is back-seated and fictively retained. It cannot be removed with the valve in service and no portion of stem will be Thrust Washer ejected by internal pressure. Protector

##### 05. Seat

Seat is contoured to ensure that all stresses due to e line pressure are counterbalanced and that Stem Assembly t e extrusion of the seat into the body cavity due o sealing forces is eliminated. Seats provide.

##### 06. Anti-static Device

Antistatic device with spring loaded ball keeps electrical continuity between ball to stem and stem to body.



##### 07. Stem Sealing

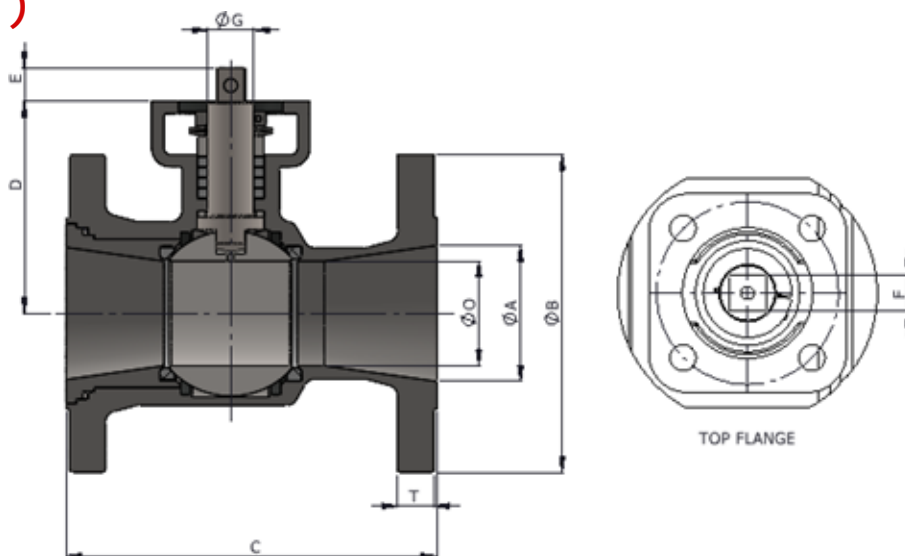
Stem packing in graphite is live loaded with the gland assembly to ensure positive and trouble free sealing. Adjustment of packing gland is accessible without disassembly of valve or operator parts.

##### 08. Body Seal

Body joint sealing is by a graphite gasket to withstand high temperatures and is contained in a precision-machined groove for extended sealing.

# DIMENSIONS AND WEIGHTS (REDUCED PORT)

SIZE: (½"-6")



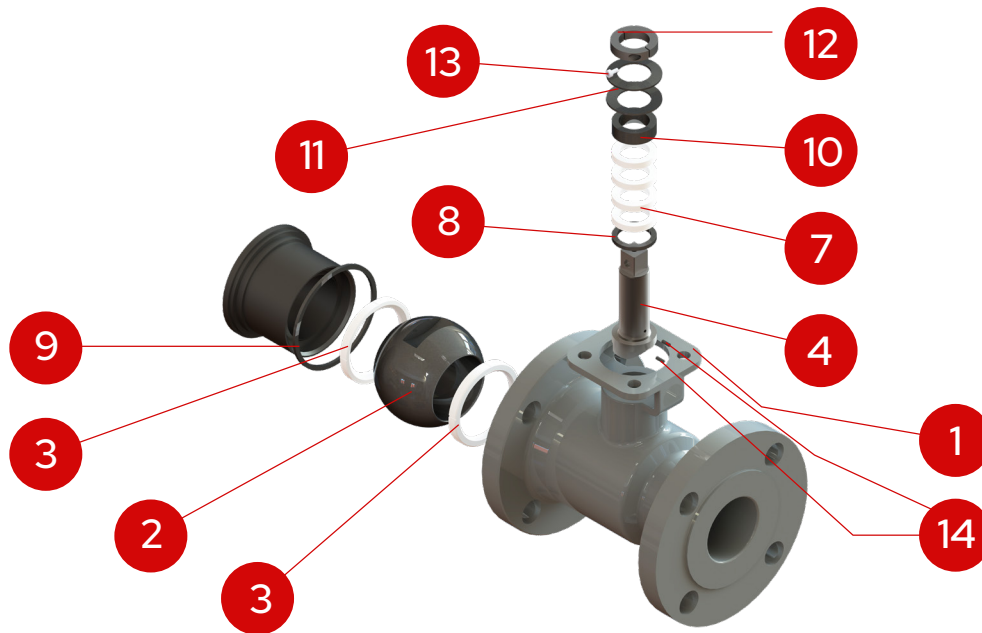
## ASME #150

| Size  | ØA  | ØO  | ØB  | TOP FLANGE DETAILS |          |      | C   | D     | E  | F    | ØG | T    | FLANGE DRILLING |          |      | Weight in kg (App.) |
|-------|-----|-----|-----|--------------------|----------|------|-----|-------|----|------|----|------|-----------------|----------|------|---------------------|
|       |     |     |     | PCD                | HOLE DIA | Nos. |     |       |    |      |    |      | PCD             | HOLE DIA | Nos. |                     |
| 1/2   | 15  | 10  | 90  | 42                 | 6        | 4    | 108 | 46    | 11 | 8.5  | 13 | 9.7  | 60.5            | 5/8      | 4    | 1.2                 |
| 3/4   | 20  | 15  | 100 | 50                 | 7        | 4    | 117 | 52    | 11 | 8.5  | 13 | 11.2 | 69.8            | 5/8      | 4    | 2                   |
| 1     | 25  | 20  | 110 | 70                 | 8.5      | 4    | 127 | 60    | 11 | 16.7 | 13 | 12.7 | 79.2            | 5/8      | 4    | 3.5                 |
| 1 1/2 | 40  | 25  | 125 | 102                | 11       | 4    | 165 | 74    | 11 | 11   | 19 | 15.7 | 98.6            | 5/8      | 4    | 5.8                 |
| 2     | 50  | 40  | 150 | 125                | 13       | 4    | 178 | 102.5 | 16 | 14   | 22 | 17.5 | 120.6           | 3/4      | 4    | 8                   |
| 2 1/2 | 65  | 50  | 180 | 140                | 17       | 4    | 190 | 130   | 18 | 16   | 22 | 22.1 | 139.7           | 3/4      | 4    | 9.2                 |
| 3     | 80  | 65  | 190 | 140                | 17       | 4    | 203 | 175   | 19 | 20   | 28 | 23.9 | 152.4           | 3/4      | 4    | 10.1                |
| 4     | 100 | 80  | 230 | 165                | 21       | 4    | 229 | 195   | 21 | 22   | 32 | 23.9 | 190.5           | 3/4      | 4    | 11                  |
| 6     | 150 | 125 | 280 | 165                | 121      | 4    | 267 | 245   | 22 | 28   | 36 | 25.4 | 241.3           | 7/8      | 8    | 12.3                |

## ASME #300

| Size   | ØA  | ØO  | ØB  | TOP FLANGE DETAILS |          |      | C   | D   | E  | F    | ØG | T    | FLANGE DRILLING |          |      | Weight in kg (App.) |
|--------|-----|-----|-----|--------------------|----------|------|-----|-----|----|------|----|------|-----------------|----------|------|---------------------|
|        |     |     |     | PCD                | HOLE DIA | Nos. |     |     |    |      |    |      | PCD             | HOLE DIA | Nos. |                     |
| 1/2"   | 15  | 10  | 95  | 42                 | 6        | 4    | 140 | 46  | 11 | 8.5  | 13 | 12.7 | 66.7            | 5/8      | 4    | 1.5                 |
| 3/4"   | 20  | 15  | 115 | 50                 | 7        | 4    | 152 | 52  | 11 | 8.5  | 13 | 14.3 | 82.6            | 3/4      | 4    | 2.5                 |
| 1"     | 25  | 20  | 125 | 70                 | 8.5      | 4    | 165 | 60  | 11 | 16.7 | 13 | 15.9 | 88.9            | 3/4      | 4    | 4                   |
| 1 1/2" | 40  | 25  | 155 | 102                | 11       | 4    | 190 | 74  | 11 | 11   | 19 | 19.1 | 114.3           | 7/8      | 4    | 6.5                 |
| 2"     | 50  | 40  | 165 | 125                | 13       | 4    | 216 | 102 | 16 | 14   | 22 | 20.7 | 127.0           | 3/4      | 8    | 8.5                 |
| 2 1/2" | 65  | 50  | 190 | 140                | 17       | 4    | 241 | 130 | 18 | 16   | 22 | 22.1 | 149.2           | 7/8      | 8    | 10.2                |
| 3      | 80  | 65  | 210 | 140                | 17       | 4    | 282 | 175 | 19 | 20   | 28 | 23.9 | 168.3           | 7/8      | 8    | 11.7                |
| 4      | 100 | 80  | 255 | 165                | 21       | 4    | 305 | 195 | 21 | 22   | 32 | 23.9 | 200.0           | 7/8      | 8    | 12.5                |
| 6      | 150 | 125 | 320 | 165                | 21       | 4    | 403 | 245 | 22 | 28   | 36 | 25.4 | 269.9           | 7/8      | 8    | 13.1                |

# MATERIAL OF CONSTRUCTION



| Item No# | Description                      | Material                                    |
|----------|----------------------------------|---------------------------------------------|
| 1.       | Body                             | Carbon Steel, Stainless Steel, Duplex Steel |
| 2.       | Ball                             | Carbon Steel, Stainless Steel, Duplex Steel |
| 3.       | **Seat                           | PTFE/RPTFE/PEEK/EPDM                        |
| 4.       | Stem                             | Stainless Steel                             |
| 5.       | Studs (Not Shown)                | ASTM A193 B7                                |
| 6.       | Nuts (Not Shown)                 | ASTM A194 2H                                |
| 7.       | **Stem Seal                      | RPTFE                                       |
| 8.       | **Stem Washer                    | RPTFE                                       |
| 9.       | **Body Seal                      | PTFE                                        |
| 10.      | Gland                            | ASTM A479 SS304                             |
| 11.      | Disc Spring                      | EN 51 CRV4                                  |
| 12.      | Gland Nut                        | ASTM A479 SS410                             |
| 13..     | Gland Nut Screw                  | ISO 3506 A2-70                              |
| 14.      | Antistatic Device (Plunger Ball) | SS316                                       |

**\*\* Recommended Spare Parts**

## BODY/END CONNECTOR/BALL:

**Carbon steel:** WCB, WCC, LCB, LCC

**Stainless Steel:** CF3M, CF8M, CF3, CF8

**Duplex Steel:** F51, A995 5A

# F SERIES BALL VALVES (FLANGED END)

## TWO-PIECE DESIGN (FULL PORT/REDUCED PORT)

### QUALITY & PERFORMANCE

V-Tork provides a wide range of quality products and reliability. F Series Floating Ball Side Entry Valves are manufactured in ISO 9001 certified facilities with QMS system and according to ASME B16.34, API 6D and BS EN ISO 17292.

## DESIGN AND ITS FEATURES

### 01. ISO Top Flange Drilling

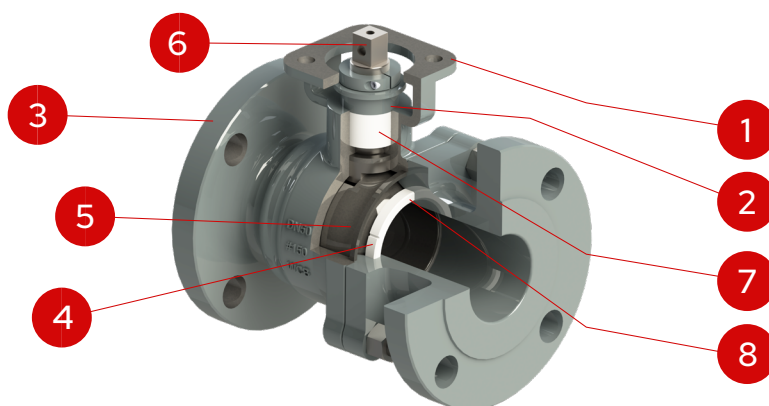
- ▶ Integral Top flange is designed per ISO 5211 for direct mounting of actuators and gear operators.
- ▶ And it is provided to easy access for adjustment of gland bolts when mounted with actuators.

### 02. Packing Gland

- ▶ Packing gland bolts are easily accessible to adjust packing the actuator in place.

### 03. Valve Body

- ▶ Flanged, two-piece design in cast construction, flanges are raised face and serrated dimensions confirm to ASME B16.5. Carbon steel valve bodies are finished with two coats of zinc-rich epoxy excellent corrosion resistance



### 04. Seat

- ▶ Seat is contoured to ensure that all stresses due to the line pressure are counter balanced and that the extrusion of the seat into the body cavity due to sealing is eliminated.

### 05. Ball

- ▶ Floating design is precision machined ball with superior finish and sphericity ensures extended seat life and low operating torques.
- ▶ The combination of the balanced seat design and ball ensures consistent and dependable leak tightness.

### 06. Stem

- ▶ Stem in stainless steel, heavy-duty construction with double D or round and keyed configurations for positive engagement with all types of valve operations.

### 07. Stem Seal

- ▶ Heavy duty engineered seal is provided to absorb side and thrust loads. It also reduces stem torques and protects stem packing from deformation and gives extended stem sealing life.

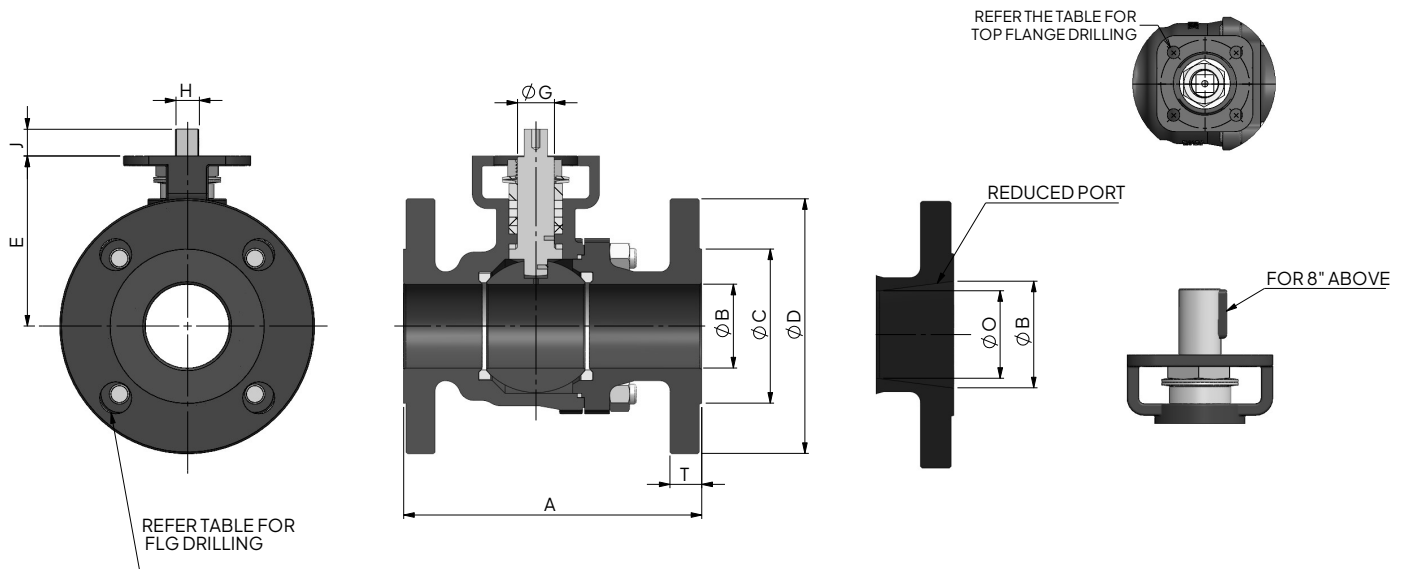
### 08. Body Seal

- ▶ Body joint sealing is by graphite/reinforced graphite gasket to withstand high temperatures and is contained in a precision machined groove for extended sealing life.

### 09. Antistatic Device

- ▶ Static electricity builds up inside a valve when the ball rubs against the non-metallic seats.
- ▶ V-Tork floating ball valves have inbuilt antistatic mechanism to provide electrical continuity which eliminates the possibility of hazard.
- ▶ Antistatic devices at the ball-stem interface and body stem interface.

# DIMENSIONS AND WEIGHTS



## ASME CLASS #150(F SERIES)

| Valve Size |     | A   |     | T    | $\varnothing B$ | $\varnothing O$ | $\varnothing C$ | E     | $\varnothing D$ | Flange Drilling |                    |      |
|------------|-----|-----|-----|------|-----------------|-----------------|-----------------|-------|-----------------|-----------------|--------------------|------|
| Inch       | DN  | LP  | SP  |      |                 |                 |                 |       |                 | PCD             | Hole $\varnothing$ | Nos. |
| 1/2"       | 15  | 108 |     | 11.2 | 15              | 10              | 35              | 46    | 89              | 60.5            | 16                 | 4    |
| 3/4"       | 20  | 117 |     | 12.7 | 20              | 15              | 43              | 52    | 100             | 69.9            | 16                 | 4    |
| 1"         | 25  | 127 |     | 14.2 | 25              | 20              | 51              | 61    | 110             | 79.4            | 16                 | 4    |
| 1 1/2"     | 40  | 165 |     | 17.4 | 38              | 25              | 73              | 74    | 125             | 98.5            | 16                 | 4    |
| 2"         | 50  | 178 |     | 19   | 51              | 40              | 92              | 101   | 150             | 120.7           | 16                 | 4    |
| 2 1/2"     | 65  | 190 |     | 22.1 | 62              | 50              | 105             | 115   | 180             | 139.7           | 19                 | 4    |
| 3"         | 80  | 203 |     | 23.9 | 76              | 65              | 127             | 122   | 190             | 152.4           | 19                 | 4    |
| 4"         | 100 | 229 |     | 23.9 | 102             | 80              | 157.2           | 152.5 | 230             | 190.5           | 19                 | 8    |
| 5"         | 125 | 267 |     | 23.9 | 125             | 100             | 185.7           | 210   | 255             | 215.9           | 22.2               | 8    |
| 6"         | 150 | 394 | 267 | 25.4 | 125             | 125             | 216             | 226   | 280             | 241.3           | 22.2               | 8    |
| 8"         | 200 | 457 |     | 28.4 | 202             | 150             | 270             | 312   | 345             | 298.5           | 22.2               | 8    |

| $\varnothing G$ | H  | J  | Key Size | Top Flange Drilling |       |                    |      | App. Weight(Kg) |
|-----------------|----|----|----------|---------------------|-------|--------------------|------|-----------------|
|                 |    |    |          | ISO 5211            | PCD 1 | Hole $\varnothing$ | Nos. |                 |
| 12              | 10 | 11 | -        | F05                 | 50    | 7                  | 4    | 1.6             |
| 12              | 10 | 11 | -        | F05                 | 50    | 7                  | 4    | 2.2             |
| 13              | 10 | 11 | -        | F05                 | 50    | 7                  | 4    | 2.8             |
| 14              | 12 | 14 | -        | F05                 | 50    | 7                  | 4    | 5.6             |
| 22              | 16 | 14 | -        | F07                 | 70    | 10                 | 4    | 8.5             |
| 22              | 16 | 16 | -        | F07                 | 70    | 10                 | 4    | 13              |
| 28              | 20 | 18 | -        | F10                 | 102   | 12                 | 4    | 16.5            |
| 32              | 22 | 19 | -        | F10                 | 102   | 12                 | 4    | 29.5            |
| 36              | 28 | 21 | -        | F12                 | 125   | 14                 | 4    | 56              |
| 45              | 32 | 22 | -        | F12                 | 125   | 14                 | 4    | 62              |
| 50              | -  | 24 | 12 x 8   | F16                 | 165   | 22                 | 4    | 142             |

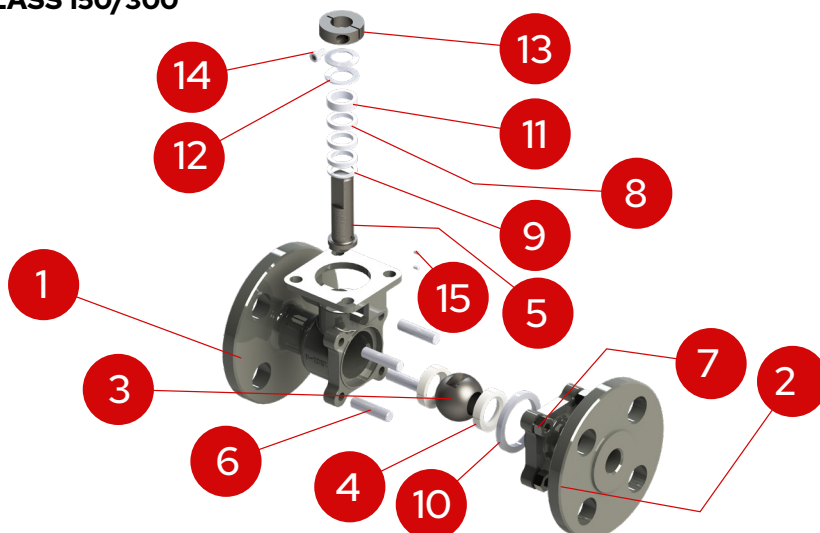
## ASME CLASS #300(F SERIES)

| Valve Size |     | A   |     | T    | ØB  | ØO  | ØC    | E   | ØD  | Flange Drilling |        |      |
|------------|-----|-----|-----|------|-----|-----|-------|-----|-----|-----------------|--------|------|
| Inch       | DN  | LP  | SP  |      |     |     |       |     |     | PCD             | Hole Ø | Nos. |
| 1/2"       | 15  | 140 |     | 14.2 | 15  | 10  | 35    | 46  | 95  | 66.7            | 16     | 4    |
| 3/4"       | 20  | 152 |     | 15.7 | 20  | 15  | 43    | 52  | 115 | 82.6            | 19     | 4    |
| 1"         | 25  | 165 |     | 17.2 | 25  | 20  | 51    | 65  | 125 | 88.9            | 19     | 4    |
| 1 1/2"     | 40  | 190 |     | 20.5 | 38  | 25  | 73    | 88  | 155 | 114.3           | 22.2   | 4    |
| 2"         | 50  | 216 |     | 22.1 | 51  | 38  | 92    | 116 | 165 | 127             | 19     | 8    |
| 2 1/2"     | 65  | 241 |     | 24.9 | 62  | 51  | 105   | 122 | 190 | 149.2           | 22.2   | 8    |
| 3"         | 80  | 282 |     | 26.9 | 76  | 62  | 127   | 132 | 210 | 168.3           | 22.2   | 8    |
| 4"         | 100 | 305 |     | 30.2 | 102 | 76  | 157.2 | 165 | 225 | 200             | 22.2   | 8    |
| 5"         | 125 | 403 |     | 33.3 | 125 | 102 | 185.7 | 225 | 280 | 235             | 22.2   | 8    |
| 6"         | 150 | 403 |     | 35.1 | 150 | 125 | 216   | 238 | 320 | 269.9           | 22.2   | 12   |
| 8"         | 200 | 502 | 419 | 41.1 | 202 | 150 | 270   | 325 | 380 | 330.2           | 25.4   | 12   |

| ØG | H  | J  | Key Size | Top Flange Drilling |      |        |      | App. Weight(Kg) |
|----|----|----|----------|---------------------|------|--------|------|-----------------|
|    |    |    |          | ISO 5211            | PCD1 | Hole Ø | Nos. |                 |
| 11 | 10 | 11 | -        | F05                 | 50   | 7      | 4    | 1.8             |
| 13 | 10 | 11 | -        | F05                 | 50   | 7      | 4    | 2.5             |
| 13 | 10 | 11 | -        | F05                 | 50   | 7      | 4    | 4.8             |
| 19 | 15 | 14 | -        | F05                 | 50   | 7      | 4    | 8.5             |
| 22 | 18 | 14 | -        | F07                 | 70   | 10     | 4    | 12              |
| 28 | 22 | 16 | -        | F07                 | 70   | 10     | 4    | 19.8            |
| 36 | 28 | 18 | -        | F10                 | 102  | 12     | 4    | 31              |
| 45 | 36 | 19 | -        | F10                 | 102  | 12     | 4    | 47              |
| 45 | 38 | 21 | -        | F12                 | 125  | 14     | 4    | 68              |
| 50 | 40 | 22 | -        | F12                 | 125  | 14     | 4    | 98              |
| 60 | -  | 24 | 12 x 8   | F16                 | 165  | 22     | 4    | 160             |

## STANDARD MATERIAL OF CONSTRUCTION

SIZE 1/2" TO 8", CLASS 150/300



## LIST OF PARTS

| Item No# | Description                      | Material                                    |
|----------|----------------------------------|---------------------------------------------|
| 1.       | Body                             | Carbon Steel, Stainless Steel, Duplex Steel |
| 2.       | End Connector                    | Carbon Steel, Stainless Steel, Duplex Steel |
| 3.       | Ball                             | Carbon Steel, Stainless Steel, Duplex Steel |
| 4.       | **Seat                           | PTFE/RPTFE/PEEK/EPDM                        |
| 5.       | Stem                             | Stainless Steel                             |
| 6.       | Studs (Not Shown)                | ASTM A193 B7                                |
| 7.       | Nuts (Not Shown)                 | ASTM A194 2H                                |
| 8.       | **Stem Seal                      | RPTFE                                       |
| 9.       | **Stem Washer                    | RPTFE                                       |
| 10.      | **Body Seal                      | PTFE                                        |
| 11.      | Gland                            | ASTM A479 SS304                             |
| 12.      | Disc Spring                      | EN 51 CRV4                                  |
| 13.      | Gland Nut                        | ASTM A479 SS410                             |
| 14.      | Gland Nut Screw                  | ISO 3506 A2-70                              |
| 15.      | Antistatic Device (Plunger Ball) | SS316                                       |

**\*\* Recommended Spare Parts**

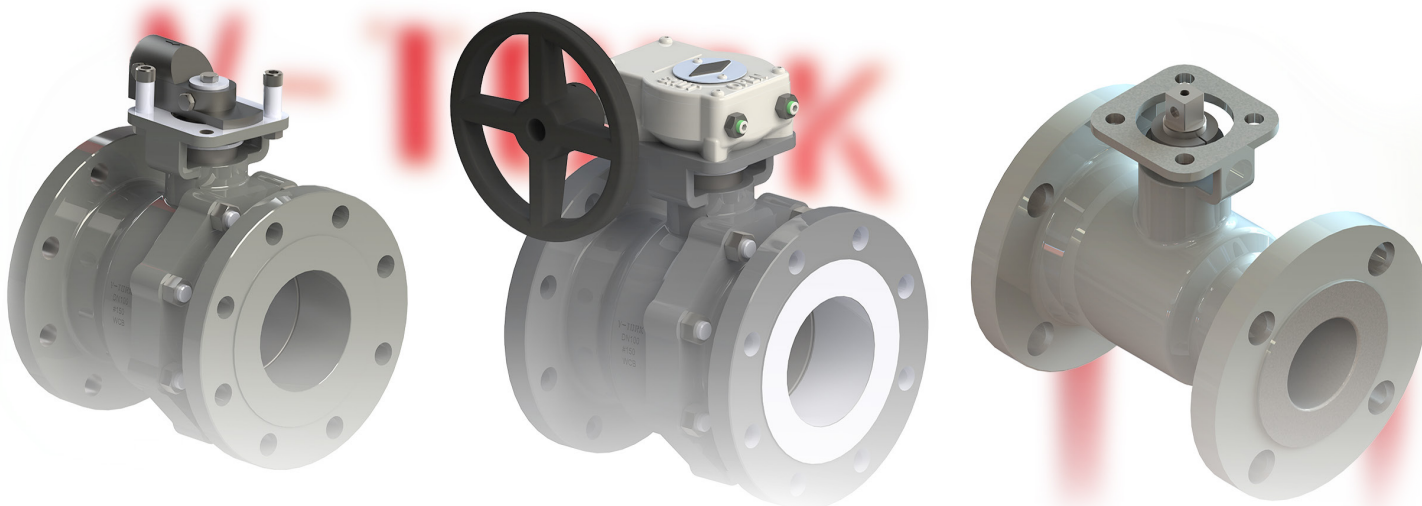
## BODY/END CONNECTOR/BALL:

**Carbon steel:** WCB, WCC, LCB, LCC

**Stainless Steel:** CF3M, CF8M, CF3, CF8

**Duplex Steel:** F51, A995 5A

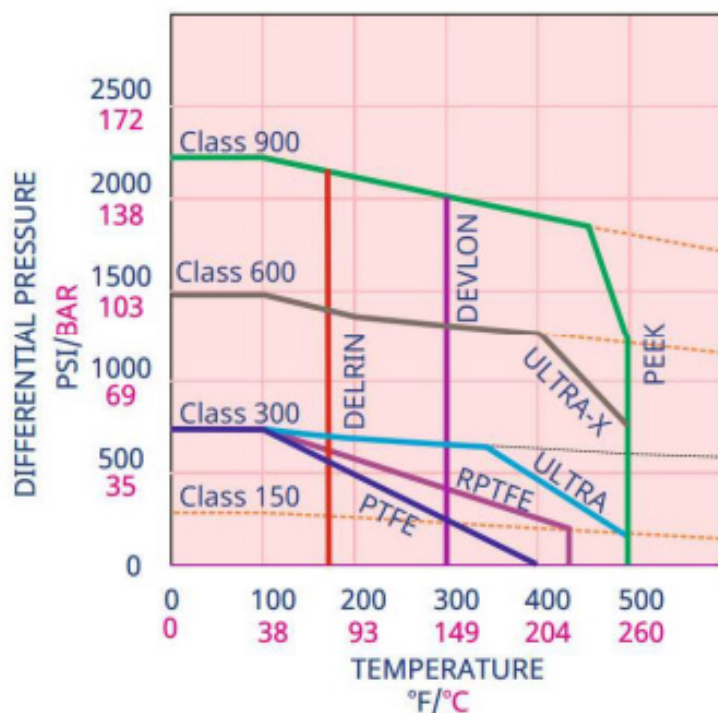
**Note:** Lifting lugs/supports are not provided, unless otherwise specified by Customer



## TORQUE DATA (Nm/Lbf-Inch)

| Torque Data(Nm/Lbf) |     |             |                     |        |     |        |     |       |     |       |
|---------------------|-----|-------------|---------------------|--------|-----|--------|-----|-------|-----|-------|
| Valve Size          |     | Torque Type | ASME Pressure Class |        |     |        |     |       |     |       |
| Inch                | DN  |             | 150                 |        | 300 |        | 150 |       | 300 |       |
|                     |     |             | Nm                  | Lbf    | Nm  | Lbf    | Nm  | Lbf   | Nm  | Lbf   |
| 1/2"                | 15  | BTO         | 5                   | 44.3   | 6   | 53.1   | 8   | 70.8  | 12  | 106.2 |
|                     |     | ETC         | 4                   | 35.4   | 5   | 44.3   | 7   | 62.0  | 9   | 79.7  |
| 3/4"                | 20  | BTO         | 7                   | 62.0   | 8   | 70.8   | 10  | 88.5  | 17  | 150.5 |
|                     |     | ETC         | 6                   | 53.1   | 6   | 53.1   | 8   | 70.8  | 13  | 115.1 |
| 1"                  | 25  | BTO         | 8                   | 70.8   | 15  | 132.8  | 17  | 150.5 | 21  | 185.9 |
|                     |     | ETC         | 7                   | 62.0   | 12  | 106.2  | 14  | 123.9 | 18  | 159.3 |
| 1 1/2"              | 40  | BTO         | 19                  | 168.2  | 19  | 168.2  | 25  | 221.3 | 31  | 274.4 |
|                     |     | ETC         | 17                  | 150.5  | 14  | 123.9  | 21  | 185.9 | 26  | 230.1 |
| 2"                  | 50  | BTO         | 29                  | 256.7  | 30  | 265.5  | 36  | 318.6 | 42  | 371.7 |
|                     |     | ETC         | 24                  | 212.4  | 22  | 194.7  | 32  | 283.2 | 33  | 292.1 |
| 2 1/2"              | 65  | BTO         | 50                  | 442.5  | 52  | 460.2  | -   | -     | -   | -     |
|                     |     | ETC         | 42                  | 371.7  | 40  | 354.0  | -   | -     | -   | -     |
| 3"                  | 80  | BTO         | 65                  | 575.3  | 75  | 663.8  | -   | -     | -   | -     |
|                     |     | ETC         | 52                  | 460.2  | 55  | 486.8  | -   | -     | -   | -     |
| 4"                  | 100 | BTO         | 144                 | 1274.4 | 161 | 1424.9 | -   | -     | -   | -     |
|                     |     | ETC         | 122                 | 1079.7 | 124 | 1097.4 | -   | -     | -   | -     |
| 5"                  | 125 | BTO         | 220                 | 1947.0 | 330 | 2920.5 | -   | -     | -   | -     |
|                     |     | ETC         | 176                 | 1557.6 | 264 | 2336.4 | -   | -     | -   | -     |
| 6"                  | 150 | BTO         | 431                 | 3814.4 | 453 | 4009.1 | -   | -     | -   | -     |
|                     |     | ETC         | 394                 | 3486.9 | 320 | 2832.0 | -   | -     | -   | -     |
| 8"                  | 200 | BTO         | 750                 | 6637.5 | 900 | 7965.0 | -   | -     | -   | -     |
|                     |     | ETC         | 600                 | 5310.0 | 720 | 6372.0 | -   | -     | -   | -     |

## TORQUE DATA (Nm/Lbf-Inch)



## TEMPERATURE LIMITS

| Material |           | Temperature Limits |      |             |     |
|----------|-----------|--------------------|------|-------------|-----|
|          |           | Lower Limit        |      | Upper Limit |     |
|          |           | °F                 | °C   | °F          | °C  |
| Body     | WCB       | -20                | -29  | 800         | 425 |
|          | CF8/CF3   | -320               | -196 | 1000        | 538 |
|          | CF8M/CF3M | -320               | -196 | 1000        | 538 |
| Seat     | PTFE      | -40                | -40  | 392         | 200 |
|          | RPTFE     | -58                | -50  | 428         | 220 |
|          | PEEK      | -58                | -50  | 500         | 260 |
| Seal     | HNBR      | -50                | -46  | 302         | 150 |
|          | VITON B   | -4                 | -20  | 392         | 200 |
|          | PTFE      | -40                | -40  | 392         | 200 |
|          | RPTFE     | -58                | -50  | 428         | 220 |

## STANDARD AND SPECIFICATIONS

### DESIGN

API 6D/BS EN ISO 17292/ASME B16.34  
/ISO 17292/ASME B16.34

### FACE TO FACE

API 6D/ASME B16.10

### SOCKET WELD END

ASME B16.11

### SCREWED END

ASME B1.20.1

### TESTING

ISO 17292/ISO 5208/ EN 12266-1/API 598/API 6D

### FLANGE DESIGN

ASME B16.5 for BW is B16.25

### PRESSURE TEMPERATURE RATING

ASME B16.34

### FEATURES

ISO 5211 Mounting Pad, Anti-Static Device, NACE Compliant, Graphite Packing, Low Fugitive Emission.

### END CONNECTION

Flanged End (F SERIES)/Thread End,  
Socket Weld end & Butt weld End  
(S SERIES)

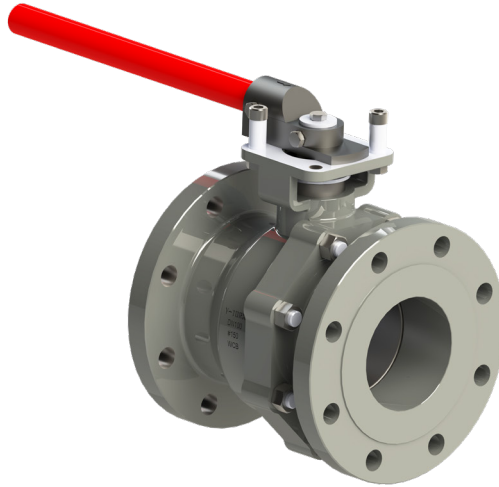
### VALVE OPERATION

Hand lever / Gear Operated / Pneumatic  
operated.

# OPERATOR INFORMATIONS

## LEVER OPERATED

Valves upto 8" Full Bore and it can be supplied with handles for manual operation. Pad locking arrangement is provided as an option to prevent unauthorized operation.



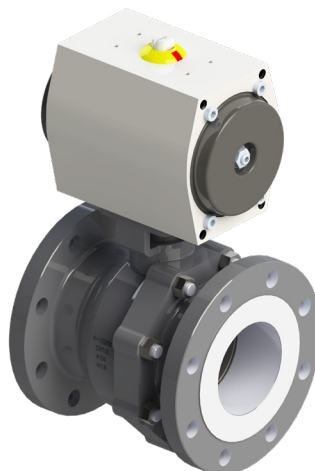
## GEAR OPERATED

Valves are mounted with gear operators for manual operation, Gear operators can also be attached with chain wheel operators to open or close valves located on pipelines at high elevations.



## ACTUATOR OPERATED

All Valves can be mounted with pneumatic or electric actuators for complete on-off automation. Valves can be mounted with manual overrides.



# Engineered for Global Performance



- |                |                 |               |               |                  |
|----------------|-----------------|---------------|---------------|------------------|
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| 3. Germany     | 8. Dubai        | 13. Vietnam   | 18. Mexico    | 23. Canada       |
| 4. Netherlands | 9. Kenya        | 14. Australia | 19. Greece    | 24. Bangladesh   |
| 5. Nigeria     | 10. Oman        | 15. Russia    | 20. Indonesia | 25. Singapore    |

**V-TORK®**  
INDIA



ISO 9001:2015  
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