



Your Partner of Flow Control System

# FLOATING BALL VALVE

Cast Steel  
Forged Steel

[www.ydfvalve.com](http://www.ydfvalve.com)

Your Partner of Flow Control System

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YDF Reserves the right to change design, materials or specifications without prior notice and free of obligation to provide or install such changes on products sold previously.



Cat. YDF-002-R13



**YDF**  
Your Partner of  
Flow Control System

YDF VALVES was established in year 1978, as one of the leading valve manufacturers in China, YDF is specialized in the development of innovative design, through intensive R&D programs and a commitment to be a good partner of flow control system.

YDF's main product lines include Ball, Gate, Globe, Check, Butterfly and Power Station valves. These products have been widely used throughout the world in Oil, Gas, Chemical, Refining, Power Generation, Marine and Pipeline Transmission industrial application.

**YDF's Facilities**

YDF sales headquarter is located in Shanghai, China, and YDF Valves are manufactured in 3 specialized manufacturing plants located in Yancheng City, Jiangsu Province, China, and 2 professional casting foundries located in Binhai City, Jiangsu Province, China. We have a total of 916 employees and 100,000 meter square cover area. YDF has a specialized quality testing center, CNC machine center and places high emphasis on numerous quality testing to ensure our customers receive the highest quality product possible. ERP system bring the real time production to high efficiency. In-house testing capacities include high pressure gas, cryogenic, high temperature, fugitive emission testing etc.

**Quality Assurance**

YDF's quality assurance is dedicated to supply zero defect valves to customers with reliable service life. Through our quality compliance, we have achieved the following certifications: ISO9001, ISO14001, OASHS18001, CE/PED, ATEX, API 591, API6D, API 624, ABS, TS and API607/6FA. In years to come, we at YDF will continue to build quality products that meet and exceed our customers' satisfaction.

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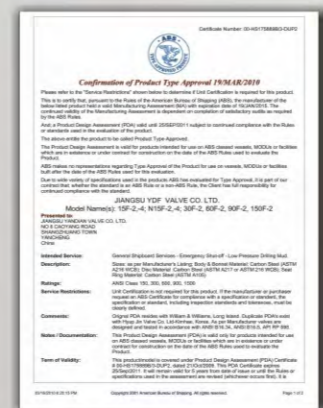
ISO 9001      ISO 14001      OHSAS 18001



CE      API 591      API 6FA      API 607



API 6D



ABS

Example:

**1 FA 8 S / A105N 1N662**

## 1 VALVE SIZE

## FA VALVE TYPE

| Symbol | Valve Type                          | Symbol | Valve Type                            | Symbol | Valve Type   |
|--------|-------------------------------------|--------|---------------------------------------|--------|--|
| FA     | 1pcs Cast Steel Floating Ball Valve | FE     | 2pcs Forged Steel Floating Ball Valve | FW     | 2pcs Full Welding Forged Steel Floating Ball Valve |
| FC     | 2pcs Cast Steel Floating Ball Valve | FF     | 3pcs Forged Steel Floating Ball Valve |        |  |

## 8 VALVE CLASS

| Class  | 150 | 300 | 600 | 800 | 900 | 1500 | 2500 |
|--------|-----|-----|-----|-----|-----|------|------|
| Symbol | 1   | 3   | 6   | 8   | 9   | 15   | 25   |

## S END CONNECTION

| End Connection | Socket Welding End | NPT Screwed End | Butt Welding End | Screwed x Socket | Raised Flange | RTJ Flange | Flat Face Flanged End | Taper Screwed End ( 55° ) |
|----------------|--------------------|-----------------|------------------|------------------|---------------|------------|-----------------------|---------------------------|
| Symbol         | S                  | N               | B                | SN               | R             | J          | F                     | NB                        |

## OPERATOR

| Symbol | Description   | Symbol | Description        | Symbol | Description        | Symbol | Description           |
|--------|---------------|--------|--------------------|--------|--------------------|--------|-----------------------|
| /      | Lever         | M      | Electric actuator  | BS     | Bare shaft         | L      | Gas over oil actuator |
| G      | Gear operator | P      | Pneumatic actuator | H      | Hydraulic actuator |        |                       |

## BODY MATERIALS

| Body Materials | A105N    | LF2      | F316      | F304      | F316L      | F304L      | ALLOY20   | F51      |
|----------------|----------|----------|-----------|-----------|------------|------------|-----------|----------|
| ASTM Ref.      | A105N    | A350 LF2 | A182 F316 | A182 F304 | A182 F316L | A182 F304L | ALLOY20   | A182 F51 |
| Body Materials | WCB      | LCB      | CF8M      | CF8       | CF3M       | CF3        | CN7M      | 4A       |
| ASTM Ref.      | A216 WCB | A352 LCB | A351 CF8M | A351 CF8  | A351 CF3M  | A351 CF3   | A351 CN7M | A890 4A  |

## 1N662 TRIM MATERIALS

| Seat   |             | "O" Ring |           | Stem   |               | Ball   |               | Packing |           |
|--------|-------------|----------|-----------|--------|---------------|--------|---------------|---------|-----------|
| Symbol | Materials   | Symbol   | Materials | Symbol | Materials     | Symbol | Materials     | Symbol  | Materials |
| 1      | PTFE        | 1        | NBR       | 1      | F 6a          | 1      | F 6a          | 1       | PTFE      |
| 2      | NYLON 12    | 2        | VITON AED | 2      | 17-4PH        | 2      | F 316         | 2       | Graphite  |
| 3      | NYLCN 1010  | 3        | VITON     | 3      | F304          | 3      | AISI 4140/ENP |         |           |
| 4      | PEEK        | 4        | VITON B   | 4      | F 316         | 4      | F304          |         |           |
| 5      | PCTFE       | 5        | HNBR070   | 5      | AISI 4140/ENP | 5      | 17-4PH        |         |           |
| 6      | FILLED PTFE | 6        | VITON GLT | 6      | F316          | 6      | F316          |         |           |
| 7      | TFM1700     | 7        | BUNA-N    | 7      | LF2/ENP       | 7      | LF2/ENP       |         |           |
| 8      | RPTFE       | N        | /         | 8      | F51           | 8      | F51           |         |           |

## Blow-out Proof Stem

Stem is designed with collar, which will prevent stem from being blow out, when medium passes through the valve or the valve is disassembled to repair. ( Fig.1 )

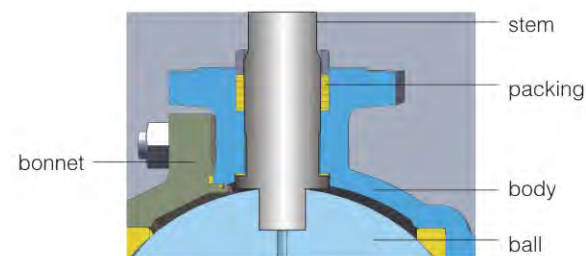


Fig.1

## Anti-static Device

When open and close the valve, the friction between the ball and the non-metal seat will generate static charges. To avoid static spark, an antistatic device is designed on the valve to derive the accumulated static from the ball. ( Fig.2 )

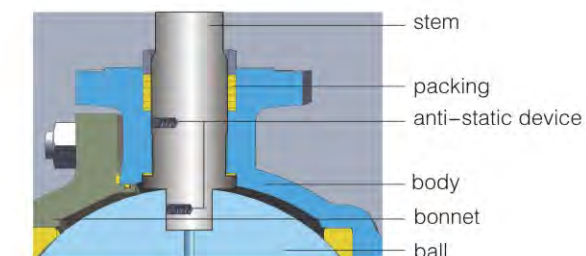
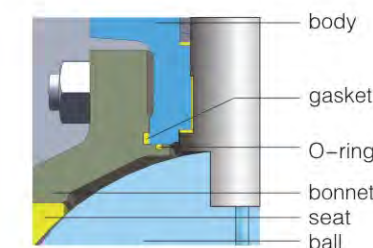
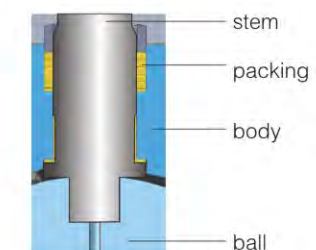
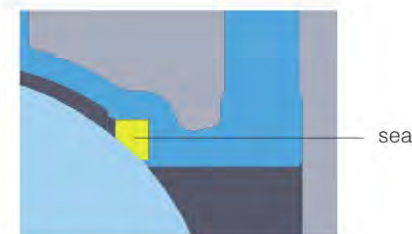


Fig.2

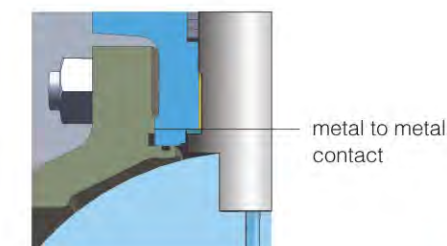
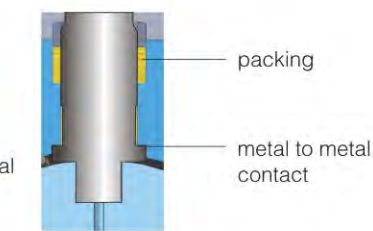
## Fire Safe Design

The seat, stem and body joint of ball valve are with fire safe design. When non-metal materials such as O-rings, soft seats etc. And decomposed or deteriorated by fire, ball valve changes to metal to metal auxiliary seal structure, which will prevent/control effectively internal leakage or external leakage.

### Before Fire



### After Fire



# CAST STEEL FLOATING BALL VALVE SERIES

YDF Cast steel floating ball valve has two type designs,

including:

## FA Series -1PC

150lb: 1/2" ~8"

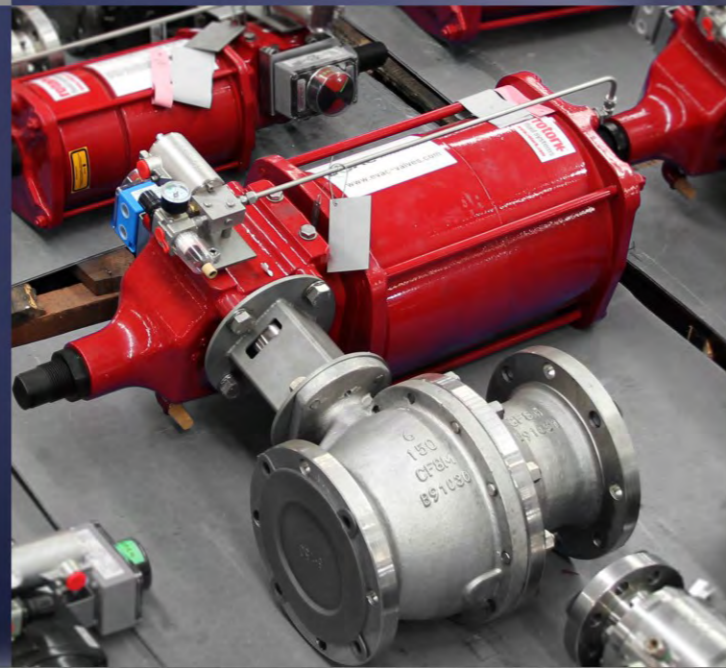
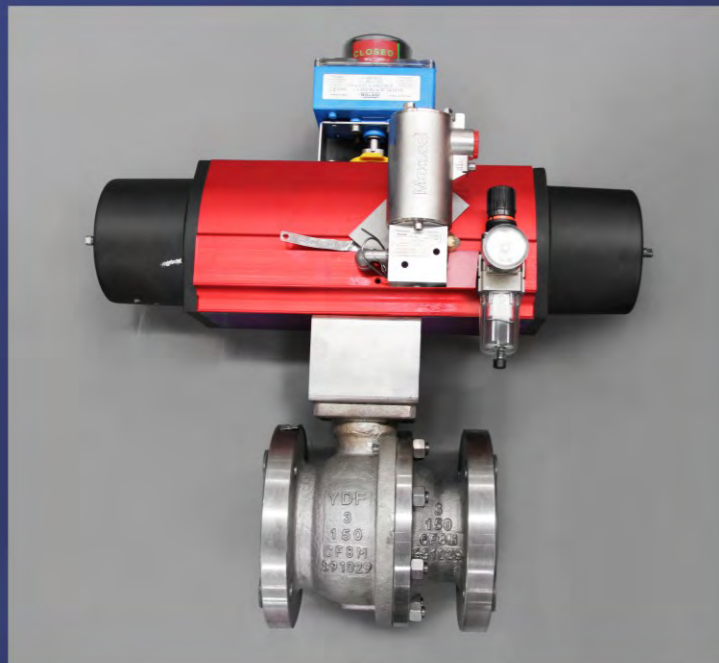
300lb: 1/2" ~8"

## FC Series -2PCS

150lb: 1/2" ~10"

300lb: 1/2" ~10"

600lb : 1/2" ~10"



## YDF Cast Steel Floating Ball Valves

Designed all to ISO17292, BS5351, ASME B16.34, etc.

Fire safe design certification by: API6FA, API 607, BS6755.

Can meet NACE MR 01-75 MR 01-03 specification requirements.

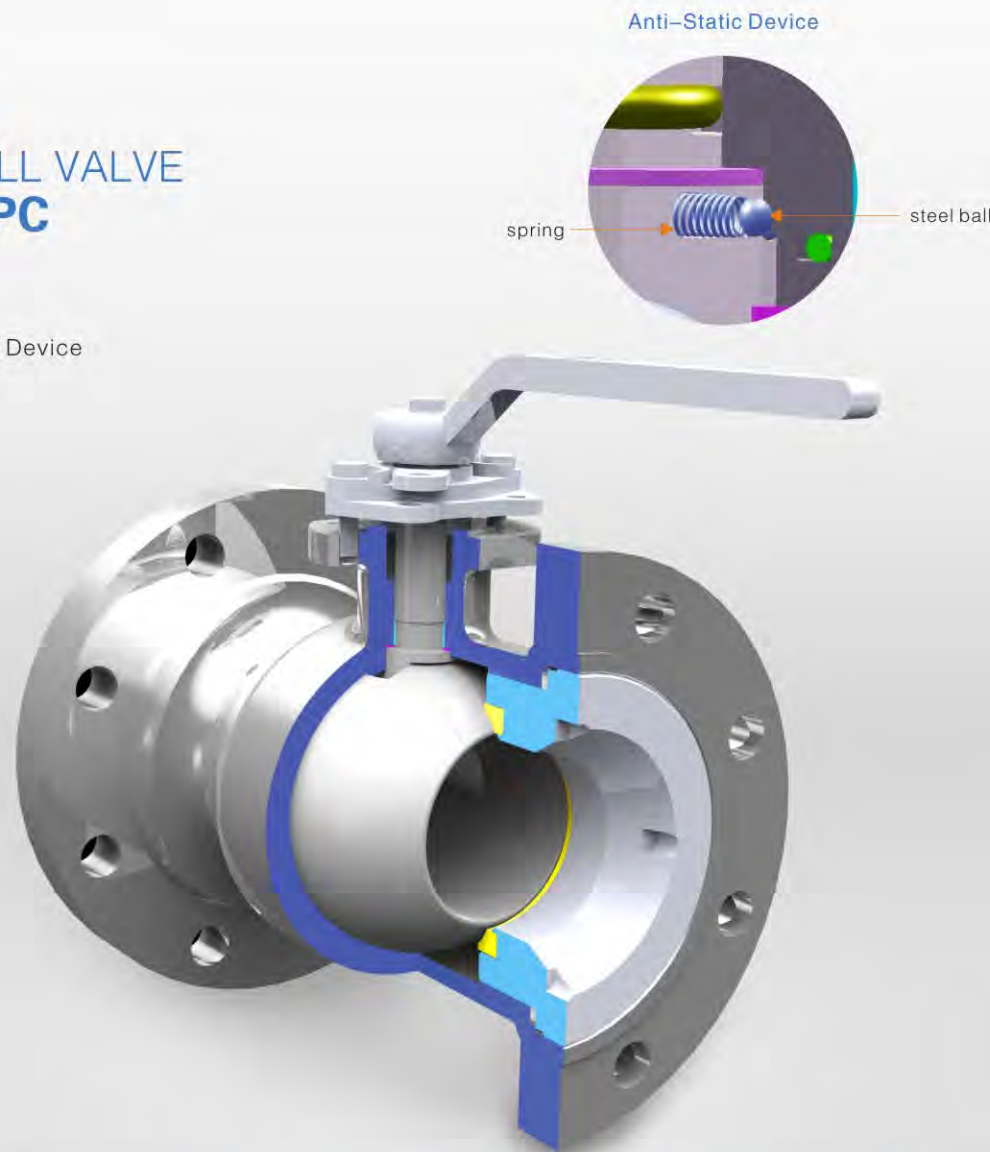
The applied temperature range: -196°C~200°C .



## CAST STEEL FLOATING BALL VALVE FA Series-1PC

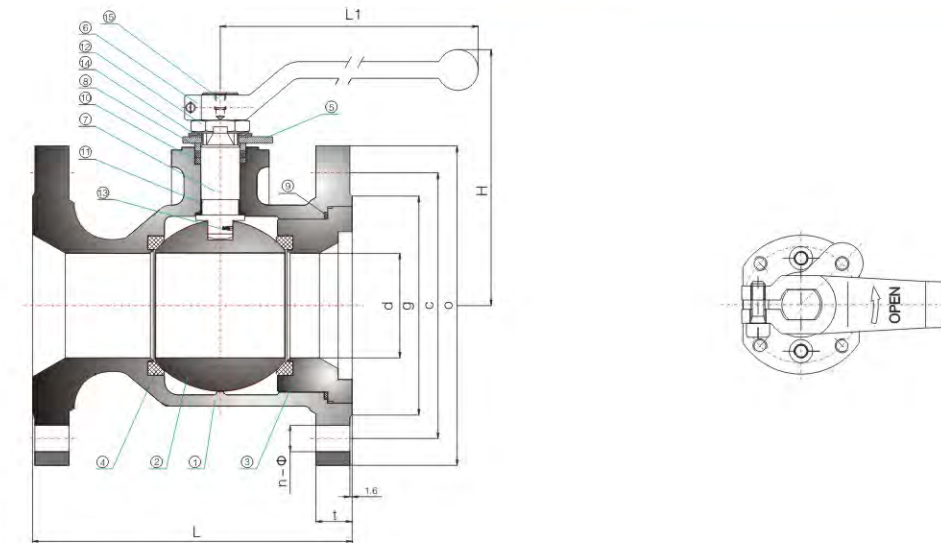
### Design Features

- Secure Line Flow Locking Device
- Blow-out Proof Stem
- Fire Safe Design
- ISO5211 Mount Pad
- Double D Stem Head
- Emission-free Gasket



| NO. | Part               | Standard           | Stainless Steel    | Sour Service       | Low Temperature    |
|-----|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1   | Body               | ASTM A216 WCB      | ASTM A351 CF8M     | ASTM A216 WCB      | ASTM A352 LCB      |
| 2   | Ball               | ASTM A105/ENP      | ASTM A182 F316     | ASTM A182 F316     | ASTM A182 F316     |
| 3   | Closure            | ASTM A21 WCB       | ASTM A351 CF8M     | ASTM A216 WCB      | ASTM A352 LCB      |
| 4   | Seat Ring          | PTFE               | PTFE               | PTFE               | PTFE               |
| 5   | Gland Flange       | ASTM A216 WCB      | ASTM A351 CF8      | ASTM A216 WCB      | ASTM A352-LCB      |
| 6   | Lever              | Carbon Steel       | Carbon Steel       | Carbon Steel       | Carbon Steel       |
| 7   | Stem               | ASTM A182 F6a      | ASTM A182 F316     | ASTM A182 F316     | ASTM A182 F316     |
| 8   | Gland              | ASTM A276 420      | ASTM A182 F316     | ASTM A182 F316     | ASTM A182 F316     |
| 9   | Gasket             | SPW.304SS+Graphite | SPW.316SS+Graphite | SPW.304SS+Graphite | SPW.316SS+Graphite |
| 10  | Packing Set        | Graphite           | Graphite           | Graphite           | Graphite           |
| 11  | Thrust Washer      | PTFE               | PTFE               | PTFE               | PTFE               |
| 12  | Retaining Nut      | ASTM A194 2H       | ASTM A194 8        | ASTM A194 2HM      | ASTM A194 7M       |
| 13  | Anti-Static Device | Stainless Steel    | Stainless Steel    | Stainless Steel    | Stainless Steel    |
| 14  | Stop Plate         | Carbon Steel       | Stainless Steel    | Carbon Steel       | Carbon Steel       |
| 15  | Bolt               | Carbon Steel       | Stainless Steel    | Stainless Steel    | Stainless Steel    |

Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.



### 150LB Dimension and Weight

| Size   | d     | g        | c         | o           | t         | n-Φ       | H              | L         | L1        | WT        |           |            |
|--------|-------|----------|-----------|-------------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|------------|
| in mm  | in mm | in mm    | in mm     | in mm       | in mm     | in mm     | in mm          | in mm     | in mm     | lb kg     |           |            |
| 1/2"   | 15    | 0.37 9.5 | 1.38 35   | 2.37 60.3   | 3.50 89   | 0.38 9.6  | 0.16-0.63 4-16 | 3.58 91   | 4.25 108  | 6.30 160  | 6.30 160  | 3.53 1.6   |
| 3/4"   | 20    | 0.59 15  | 1.69 43   | 2.76 70     | 3.88 98.5 | 0.41 10.5 | 0.16-0.63 4-16 | 3.86 98   | 4.61 117  | 6.30 160  | 6.30 160  | 4.63 2.1   |
| 1"     | 25    | 0.79 20  | 2.00 50.8 | 3.13 79.4   | 4.25 108  | 0.44 11.2 | 0.16-0.63 4-16 | 3.98 101  | 5.00 127  | 6.30 160  | 6.30 160  | 5.95 2.7   |
| 1 1/2" | 40    | 1.26 32  | 2.87 73   | 3.87 98.4   | 5.00 127  | 0.56 14.3 | 0.16-0.63 4-16 | 4.61 117  | 6.50 165  | 8.27 210  | 8.27 210  | 11.24 5.1  |
| 2"     | 50    | 1.57 40  | 3.62 92   | 4.75 120.7  | 5.98 152  | 0.63 15.9 | 0.16-0.75 4-19 | 5.28 134  | 7.01 178  | 9.84 250  | 9.84 250  | 17.42 7.9  |
| 3"     | 80    | 2.28 58  | 5.00 127  | 6.00 152.4  | 7.48 190  | 0.75 19.1 | 0.16-0.75 4-19 | 5.87 149  | 7.99 203  | 13.78 350 | 13.78 350 | 31.53 14.3 |
| 4"     | 100   | 3.15 80  | 6.18 157  | 7.50 190.5  | 9.02 229  | 0.94 24   | 0.31-0.75 8-19 | 7.44 189  | 9.02 229  | 17.72 450 | 17.72 450 | 57.10 25.9 |
| 6"     | 150   | 4.37 111 | 8.50 216  | 9.50 241.3  | 10.98 279 | 1.00 25.4 | 0.31-0.87 8-22 | 8.94 227  | 10.51 267 | 19.69 500 | 19.69 500 | 96.56 43.8 |
| 8"     | 200   | 5.67 144 | 10.63 270 | 11.75 298.5 | 13.58 345 | 1.13 28.6 | 0.31-0.87 8-22 | 10.39 264 | 11.50 292 | 27.56 700 | 27.56 700 | 169.76 77  |

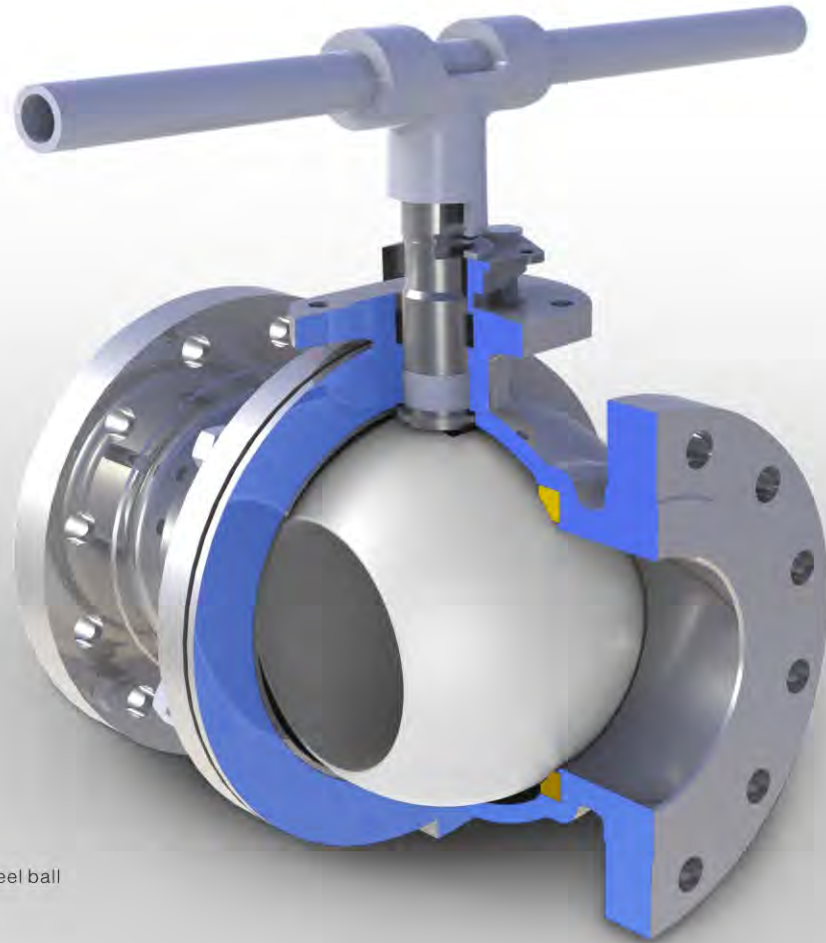
### 300LB Dimension and Weight

| Size   | d     | g        | c         | o           | t          | n-Φ       | H               | L         | L1        | WT        |           |              |
|--------|-------|----------|-----------|-------------|------------|-----------|-----------------|-----------|-----------|-----------|-----------|--------------|
| in mm  | in mm | in mm    | in mm     | in mm       | in mm      | in mm     | in mm           | in mm     | in mm     | lb kg     |           |              |
| 1/2"   | 15    | 0.37 9.5 | 1.38 35   | 2.63 66.7   | 3.74 95    | 0.56 14.3 | 0.16-0.63 4-16  | 3.58 91   | 5.51 140  | 6.30 160  | 6.30 160  | 3.53 1.6     |
| 3/4"   | 20    | 0.59 15  | 1.69 43   | 3.25 82.6   | 4.63 117.5 | 0.63 15.9 | 0.16-0.75 4-19  | 3.86 98   | 5.98 152  | 6.30 160  | 6.30 160  | 4.63 2.1     |
| 1"     | 25    | 0.79 20  | 2.00 50.8 | 3.50 88.9   | 4.88 124   | 0.69 17.5 | 0.16-0.75 4-19  | 3.98 101  | 6.50 165  | 6.30 160  | 6.30 160  | 9.04 4.1     |
| 1 1/2" | 40    | 1.26 32  | 2.87 73   | 4.50 114.3  | 6.12 155.5 | 0.81 20.7 | 0.16-0.87 4-22  | 4.61 117  | 7.48 190  | 8.27 210  | 8.27 210  | 18.08 8.2    |
| 2"     | 50    | 1.57 40  | 3.62 92   | 5.00 127    | 6.50 165   | 0.88 22.3 | 0.31-0.75 8-19  | 5.28 134  | 8.50 216  | 9.84 250  | 9.84 250  | 24.25 11     |
| 3"     | 80    | 2.28 58  | 5.00 127  | 6.63 168.3  | 8.27 210   | 1.13 28.6 | 0.31-0.87 8-22  | 5.87 149  | 11.14 283 | 13.78 350 | 13.78 350 | 47.40 21.5   |
| 4"     | 100   | 3.15 80  | 6.18 157  | 7.87 200    | 10.00 254  | 1.25 31.8 | 0.31-0.87 8-22  | 7.44 189  | 12.01 305 | 17.72 450 | 17.72 450 | 63.93 29     |
| 6"     | 150   | 4.37 111 | 8.50 216  | 10.63 270   | 12.52 318  | 1.44 36.6 | 0.47-0.87 12-22 | 8.94 227  | 15.87 403 | 19.69 500 | 19.69 500 | 154.32 70    |
| 8"     | 200   | 5.67 144 | 10.63 270 | 13.00 330.2 | 15.00 381  | 1.63 41.3 | 0.47-1 12-25    | 10.39 264 | 16.50 419 | 27.56 700 | 27.56 700 | 243.61 110.5 |

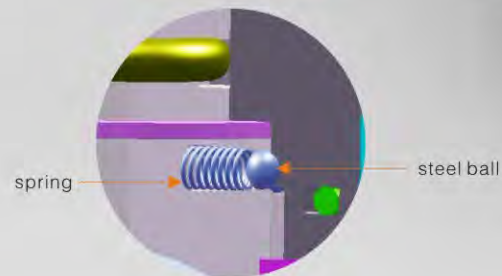
CAST STEEL  
FLOATING BALL VALVE  
**FC Series-2PCS**

**Design Features**

- Secure Line Flow Locking Device
- Blow-out Proof Stem
- Fire Safe Design
- ISO5211 Mount Pad
- Double D Stem Head
- Emission-free Gasket

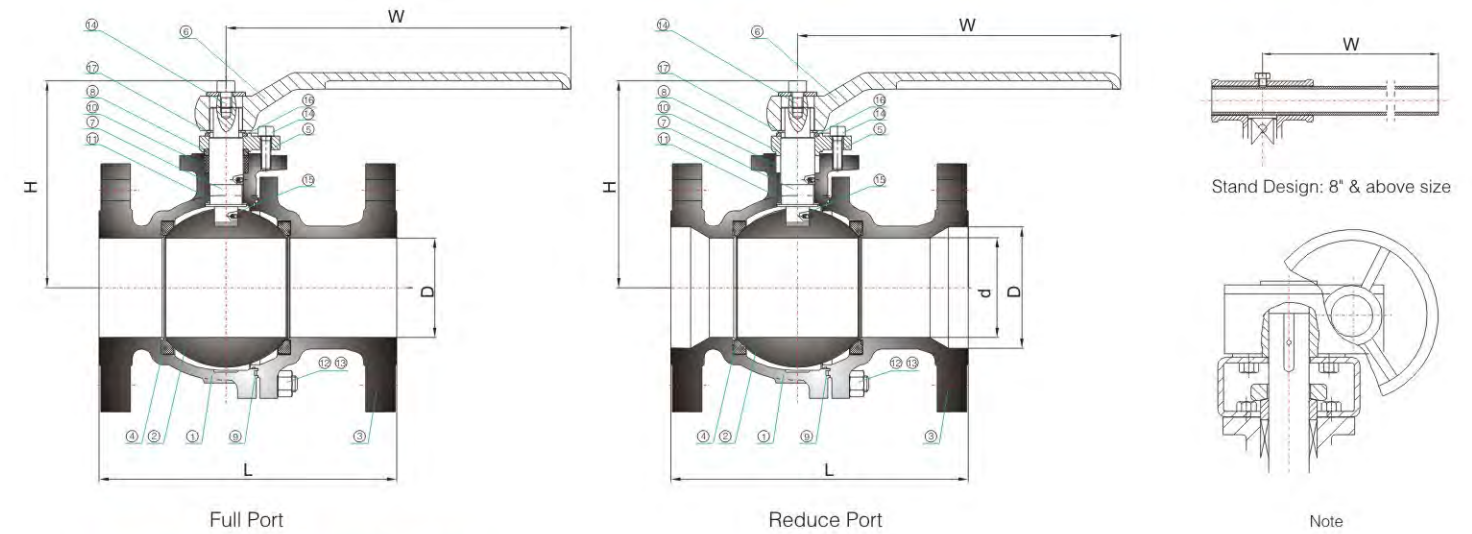


Anti-Static Device



| NO. | Part               | Standard           | Stainless Steel    | Sour Service       | Low Temperature    |
|-----|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1   | Body               | ASTM A216-WCB      | ASTM A351-CF8M     | ASTM A216-WCB      | ASTM A352-LCB      |
| 2   | Ball               | ASTM A105/ENP      | ASTM A182-F316     | ASTM A182-F316     | ASTM A182-F316     |
| 3   | Bonnet             | ASTM A216-WCB      | ASTM A351-CF8M     | ASTM A216-WCB      | ASTM A352-LCB      |
| 4   | Seat Ring          | PTFE               | PTFE               | PTFE               | PTFE               |
| 5   | Gland Flange       | ASTM A216-WCB      | ASTM A351-CF8      | ASTM A216-WCB      | ASTM A352-LCB      |
| 6   | Lever              | Carbon Steel       | Carbon Steel       | Carbon Steel       | Carbon Steel       |
| 7   | Stem               | ASTM A182-F6a      | ASTM A182-F316     | ASTM A182-F316     | ASTM A182-F316     |
| 8   | Gland              | ASTM A276-420      | ASTM A182-F316     | ASTM A182-F316     | ASTM A182-F316     |
| 9   | Gasket             | SPW.304SS+Graphite | SPW.316SS+Graphite | SPW.304SS+Graphite | SPW.316SS+Graphite |
| 10  | Packing Set        | Graphite           | Graphite           | Graphite           | Graphite           |
| 11  | Bearing            | PTFE               | PTFE               | PTFE               | PTFE               |
| 12  | Stud               | ASTM A193-B7       | ASTM A193-B8       | ASTM A193-B7M      | ASTM A320-L7M      |
| 13  | Nut                | ASTM A194-2H       | ASTM A193-8        | ASTM A194-2HM      | ASTM A194-7M       |
| 14  | Bolt               | ASTM A193-B7       | ASTM A193-B8       | ASTM A193-B7M      | ASTM A320-L7M      |
| 15  | Anti-Static Device | Stainless Steel    | Stainless Steel    | Stainless Steel    | Stainless Steel    |
| 16  | Stop Plate         | Carbon Steel       | Stainless Steel    | Carbon Steel       | Carbon Steel       |
| 17  | Retainer           | Carbon Steel       | Stainless Steel    | Stainless Steel    | Stainless Steel    |

Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.



Stand Design: 8" & above size

Note

**150LB Dimension and Weight**

| Size     |         | d    |     | D     |     | L     |     | H     |     | W     |      | WT    |       |
|----------|---------|------|-----|-------|-----|-------|-----|-------|-----|-------|------|-------|-------|
| in       | mm      | in   | mm  | in    | mm  | in    | mm  | in    | mm  | in    | mm   | lb    | kg    |
| 1/2"     | 15      | /    | /   | 0.50  | 13  | 4.25  | 108 | 3.27  | 80  | 5.91  | 150  | 5.6   | 2.5   |
| 3/4"     | 20      | /    | /   | 0.75  | 19  | 4.61  | 117 | 3.67  | 90  | 5.91  | 150  | 6.7   | 3.0   |
| 1"       | 25      | /    | /   | 1.00  | 25  | 5.00  | 127 | 4.29  | 105 | 7.09  | 180  | 10.0  | 4.5   |
| 1-1/2"   | 40      | /    | /   | 1.50  | 38  | 6.50  | 165 | 5.71  | 140 | 11.02 | 280  | 15.6  | 7.0   |
| 2"       | 50      | /    | /   | 2.00  | 51  | 7.01  | 178 | 6.12  | 150 | 11.02 | 280  | 21.1  | 9.5   |
| 2-1/2"   | 65      | /    | /   | 2.50  | 64  | 7.48  | 190 | 6.20  | 152 | 15.75 | 400  | 33.3  | 15.0  |
| 3"       | 80      | /    | /   | 3.00  | 76  | 7.99  | 203 | 7.55  | 185 | 15.75 | 400  | 42.2  | 19.0  |
| 4"       | 100     | /    | /   | 4.00  | 102 | 9.02  | 229 | 10.82 | 265 | 25.59 | 650  | 66.7  | 30.0  |
| 5"       | 125     | /    | /   | 5.00  | 127 | 14.02 | 356 | 11.22 | 275 | 41.34 | 1050 | 123.9 | 58.0  |
| 6"       | 150     | /    | /   | 6.00  | 152 | 15.5  | 394 | 14.49 | 355 | 41.34 | 1050 | 166.7 | 90.0  |
| 8"       | 200     | /    | /   | 7.99  | 203 | 17.99 | 457 | 18.61 | 456 | /     | /    | 288.7 | 160.0 |
| 10"      | 250     | /    | /   | 10.00 | 254 | 20.98 | 533 | 20.82 | 510 | /     | /    | 533.3 | 280.0 |
| 2*1-1/2" | 50*40   | 1.50 | 38  | 2.00  | 51  | 7.01  | 178 | 6.12  | 150 | 11.20 | 280  | 18.9  | 8.5   |
| 3*2"     | 80*50   | 2.00 | 51  | 3.00  | 76  | 7.99  | 203 | 7.55  | 185 | 11.20 | 280  | 37.8  | 17.0  |
| 4*3"     | 100*80  | 3.00 | 76  | 4.00  | 102 | 9.02  | 229 | 10.82 | 265 | 15.75 | 400  | 57.8  | 26.0  |
| 6*4"     | 150*100 | 4.00 | 102 | 6.00  | 152 | 15.51 | 394 | 14.49 | 355 | 25.59 | 650  | 144.4 | 65.0  |
| 8*6"     | 200*150 | 6.00 | 152 | 8.00  | 203 | 17.99 | 457 | 18.61 | 456 | 41.34 | 1050 | 257.7 | 116.0 |
| 10*8"    | 250*200 | 8.00 | 203 | 10.00 | 254 | 20.98 | 533 | 20.82 | 510 | /     | /    | 484.4 | 218.0 |

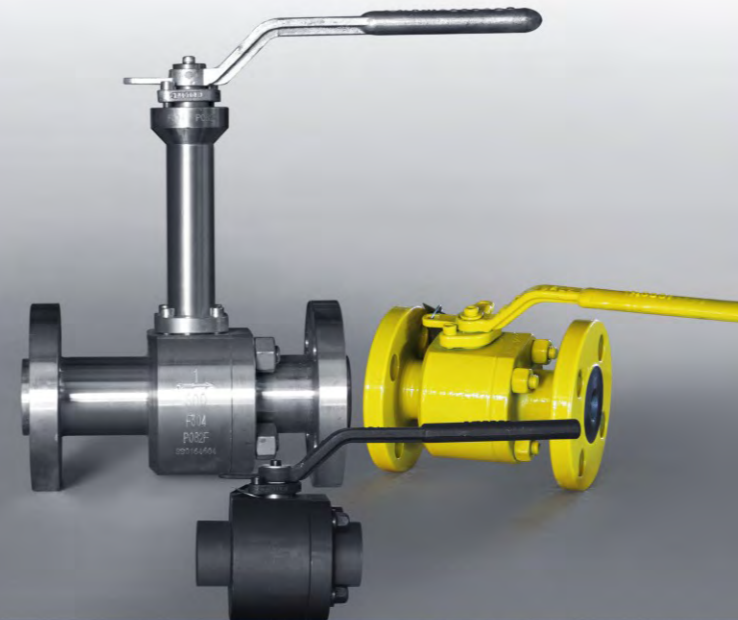
**300LB Dimension and Weight**

| Size     |         | d    |     | D     |     | L     |     | H     |     | W     |      | WT     |     |
|----------|---------|------|-----|-------|-----|-------|-----|-------|-----|-------|------|--------|-----|
| in       | mm      | in   | mm  | in    | mm  | in    | mm  | in    | mm  | in    | mm   | lb     | kg  |
| 1/2"     | 15      | /    | /   | 0.50  | 13  | 5.51  | 140 | 3.11  | 79  | 5.91  | 150  | 7.78   | 3.5 |
| 3/4"     | 20      | /    | /   | 0.75  | 19  | 5.98  | 152 | 3.78  | 96  | 7.35  | 180  | 8.89   | 4   |
| 1"       | 25      | /    | /   | 1.00  | 25  | 6.50  | 165 | 3.78  | 96  | 9.39  | 230  | 12.22  | 5.5 |
| 1-1/2"   | 40      | /    | /   | 1.50  | 38  | 7.48  | 190 | 4.72  | 120 | 12.24 | 300  | 14.95  | 11  |
| 2"       | 50      | /    | /   | 2.00  | 51  | 8.50  | 216 | 5.79  | 147 | 12.24 | 300  | 28.89  | 13  |
| 2-1/2"   | 65      | /    | /   | 2.50  | 64  | 9.49  | 241 | 6.22  | 158 | 15.75 | 400  | 46.67  | 21  |
| 3"       | 80      | /    | /   | 3.00  | 76  | 11.14 | 283 | 6.69  | 170 | 15.75 | 400  | 66.67  | 30  |
| 4"       | 100     | /    | /   | 4.00  | 102 | 12.01 | 305 | 8.27  | 210 | 25.59 | 650  | 100    | 45  |
| 5"       | 125     | /    | /   | 5.00  | 127 | 15.00 | 381 | 9.92  | 252 | 41.34 | 1050 | 144.43 | 75  |
| 6"       | 150     | /    | /   | 6.00  | 152 | 15.87 | 403 | 9.92  | 272 | 41.34 | 1050 | 211.09 | 105 |
| 8"       | 200     | /    | /   | 8.00  | 203 | 19.76 | 502 | 13.46 | 342 | 11.20 | 280  | 333.33 | 200 |
| 2*1-1/2" | 50*40   | 1.50 | 38  | 2.00  | 51  | 8.50  | 216 | 4.72  | 120 | 11.20 | 280  | 26.66  | 12  |
| 3*2"     | 80*50   | 2.50 | 64  | 3.00  | 76  | 11.14 | 283 | 5.79  | 147 | 15.75 | 400  | 53.33  | 24  |
| 4*3"     | 100*80  | 3.00 | 76  | 4.00  | 102 | 12.01 | 305 | 6.69  | 170 | 25.59 | 650  | 91.1   | 41  |
| 6*4"     | 150*100 | 4.00 | 102 | 6.00  | 152 | 15.87 | 403 | 8.27  | 210 | 41.34 | 1050 | 188.87 | 85  |
| 8*6"     | 200*150 | 6.00 | 152 | 8.00  | 203 | 19.76 | 502 | 10.71 | 272 | /     | /    | 302.19 | 136 |
| 10*8"    | 250*200 | 8.00 | 203 | 10.00 | 254 | 22.36 | 568 | 13.46 | 342 | /     | /    | 551.06 | 290 |

Note: Gear operator are available upon request.

# YDF FORGED STEEL FLOATING BALL VALVE

Designed all to ISO17292, BS5351, ASME B16.34 ,API608, etc.  
Fire safe design certification by: API6FA, API 607, BS6755.  
Can meet NACE MR 01-75 MR 01-03 specification requirements.  
The applied temperature range: -196°C~200°C .



800lb : 1/2" ~2"  
900lb : 1/2" ~2"  
1500lb : 1/2" ~2"

**FF Series-3PCS**

## FE Series-2PCS

150lb : 1/2" ~2"  
300lb : 1/2" ~2"  
600lb : 1/2" ~2"  
800lb : 1/2" ~2"  
900lb : 1/2" ~2"  
1500lb : 1/2" ~2"

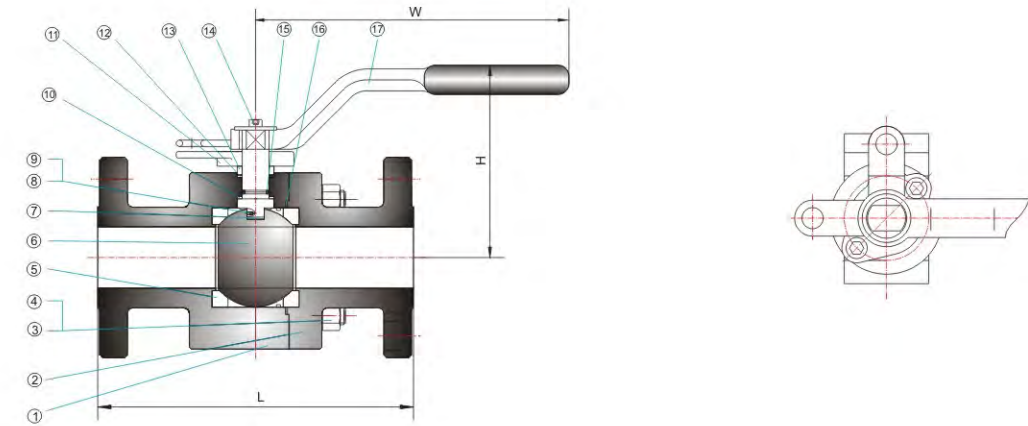
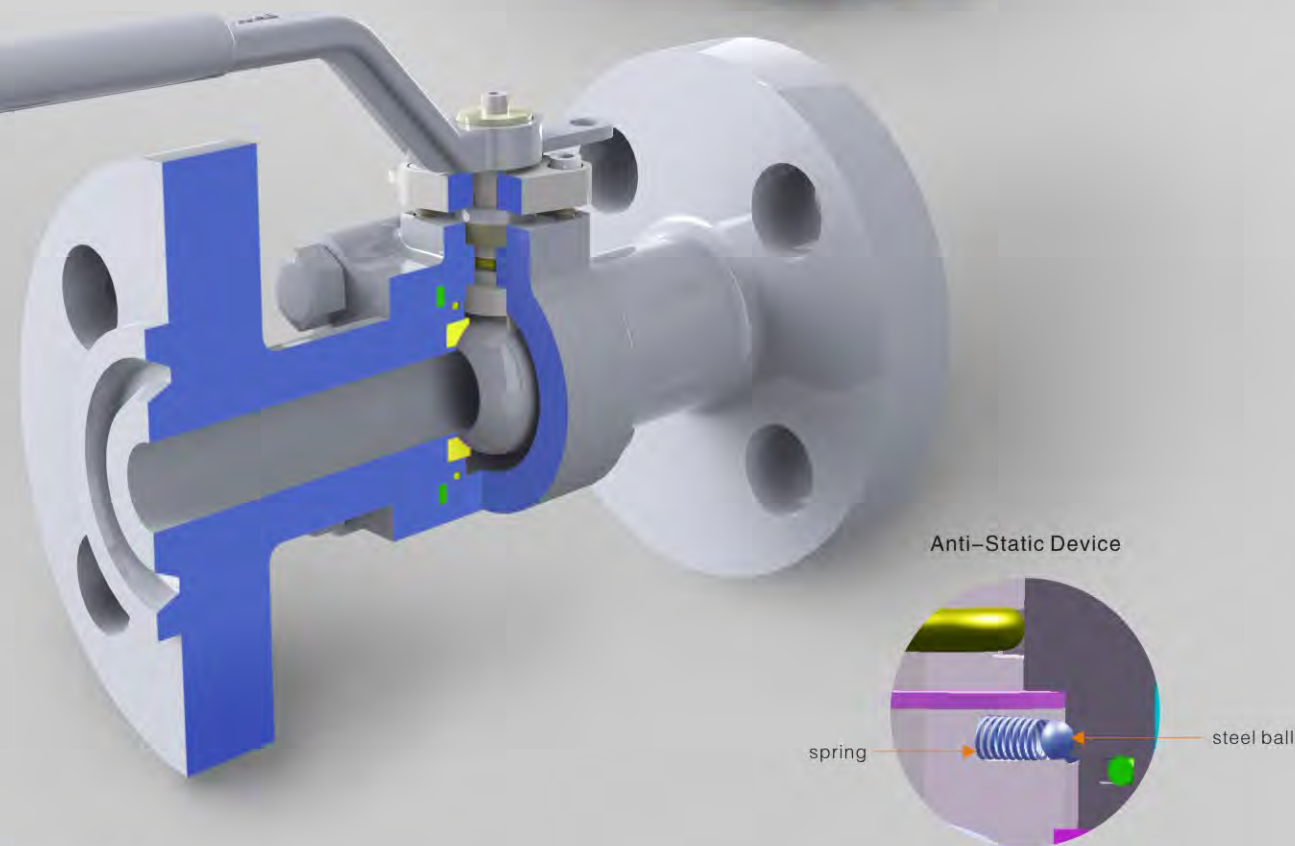
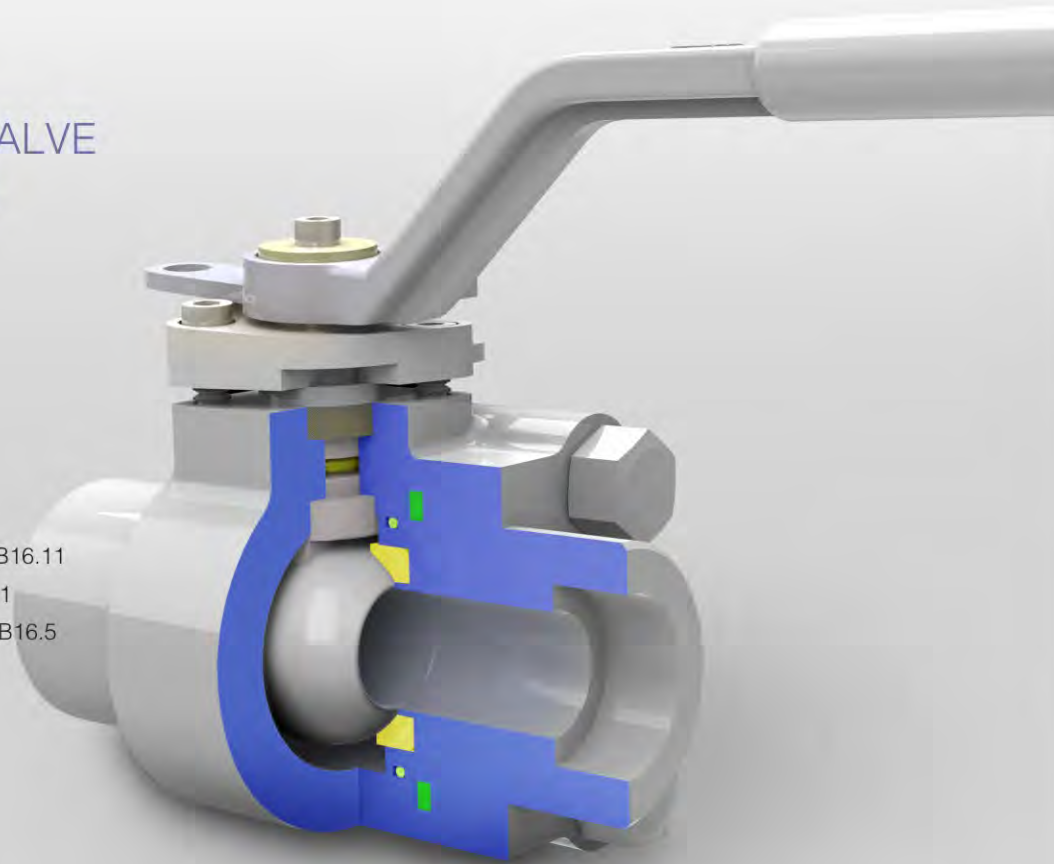


FORGED STEEL  
FLOATING BALL VALVE  
**FE Series-2PCS**

**Design Features**

- Full port or reduced port
- Fire safe tested design
- Anti-static design
- Anti blow out stem
- Integral locking device

- Socket welded ends to ANSI/ASME B16.11
- Screwed ends to ANSI/ASME B1.20.1
- Flanges(RF/RTJ) according to ANSI B16.5
- Integral flange or welded flange
- BW ends to ASME B16.25



**Material Specifications**

| No. | Part          | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Nut           | A194 2H            | A194 7             | A194 8             | A194 8             |
| 5   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 6   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 8   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 9   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 10  | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 11  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 12  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 13  | Gland         | A276 410           | A182 F6a           | A182 F304          | A182 F316(L)       |
| 14  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 15  | 'O' Ring      | VITON              | VITON              | VITON              | VITON              |
| 16  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 17  | Handle        | WCB                | WCB                | WCB                | WCB                |

Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.

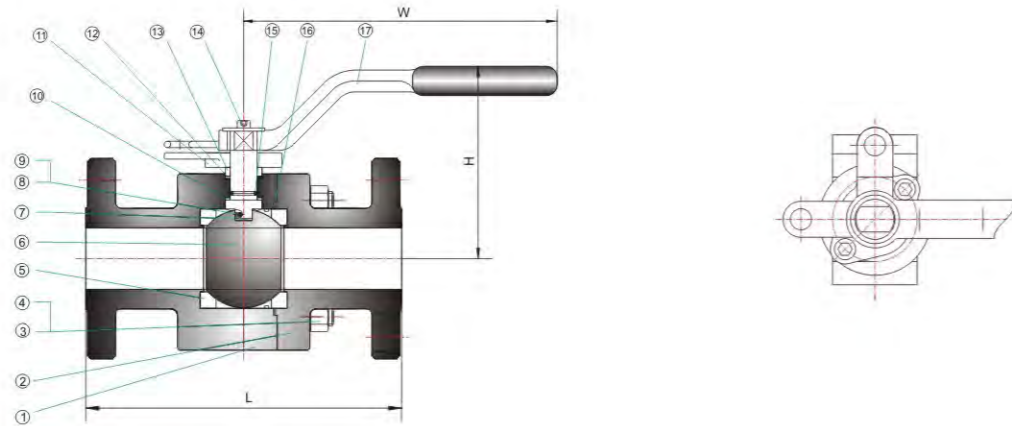
**Dimension and Weight**

| Size |     | 1/2" | 3/4" | 1"  | 1 1/2" | 2"  |
|------|-----|------|------|-----|--------|-----|
| L    | mm  | 108  | 117  | 127 | 165    | 178 |
| H    | mm  | 80   | 90   | 105 | 140    | 150 |
| W    | mm  | 150  | 180  | 230 | 300    | 300 |
| WT   | kgg | 2.7  | 5.0  | 6.1 | 13.8   | 16  |



FORGED STEEL  
FLOATING BALL VALVE  
**FE Series-2PCS**

300LB  
RF Ends



Material Specifications

| No. | Part          | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Nut           | A194 2H            | A194 7             | A194 8             | A194 8             |
| 5   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 6   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 8   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 9   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 10  | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 11  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 12  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 13  | Gland         | A276 410           | A276 410           | A182 F304          | A182 F316(L)       |
| 14  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 15  | *O* Ring      | VITON              | VITON              | VITON              | VITON              |
| 16  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 17  | Handle        | WCB                | WCB                | WCB                | WCB                |

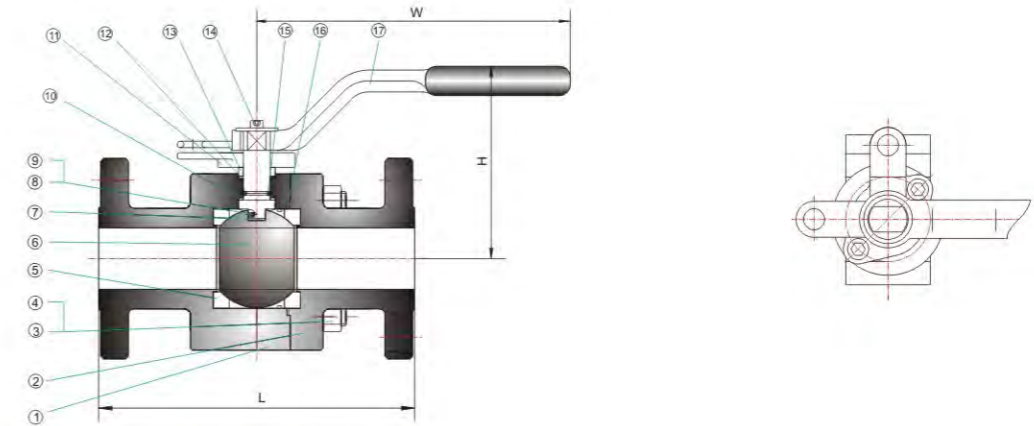
Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.

Dimension and Weight

| Size |    | 1/2" | 3/4" | 1"   | 1 1/2" | 2"   |
|------|----|------|------|------|--------|------|
| L    | mm | 140  | 152  | 165  | 190    | 216  |
| H    | mm | 80   | 90   | 105  | 140    | 150  |
| W    | mm | 150  | 180  | 230  | 300    | 300  |
| WT   | kg | 4.05 | 6.50 | 7.93 | 17.94  | 20.7 |

FORGED STEEL  
FLOATING BALL VALVE  
**FE Series-2PCS**

600LB  
RF Ends



Material Specifications

| No. | Part          | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Nut           | A194 2H            | A194 7             | A194 8             | A194 8             |
| 5   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 6   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 8   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 9   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 10  | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 11  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 12  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 13  | Gland         | A276 410           | A276 410           | A182 F304          | A182 F316(L)       |
| 14  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 15  | *O* Ring      | VITON              | VITON              | VITON              | VITON              |
| 16  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 17  | Handle        | WCB                | WCB                | WCB                | WCB                |

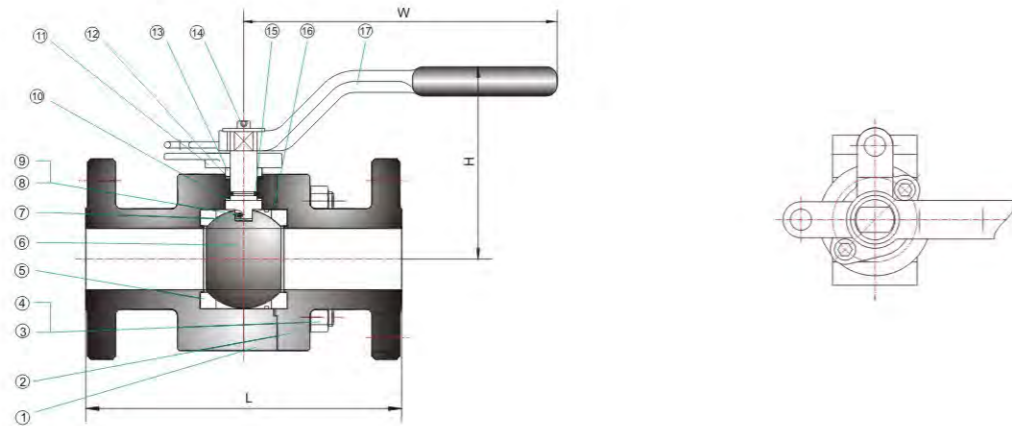
Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.

Dimension and Weight

| Size |    | 1/2" | 3/4"  | 1"    | 1 1/2" | 2"    |
|------|----|------|-------|-------|--------|-------|
| L    | mm | 165  | 190   | 216   | 241    | 292   |
| H    | mm | 80   | 90    | 105   | 140    | 150   |
| W    | mm | 150  | 180   | 230   | 300    | 300   |
| WT   | kg | 7.70 | 12.35 | 15.70 | 20.60  | 25.60 |



**FORGED STEEL  
FLOATING BALL VALVE  
FE Series-2PCS**  
900LB 1500LB  
RF Ends



**Material Specifications**

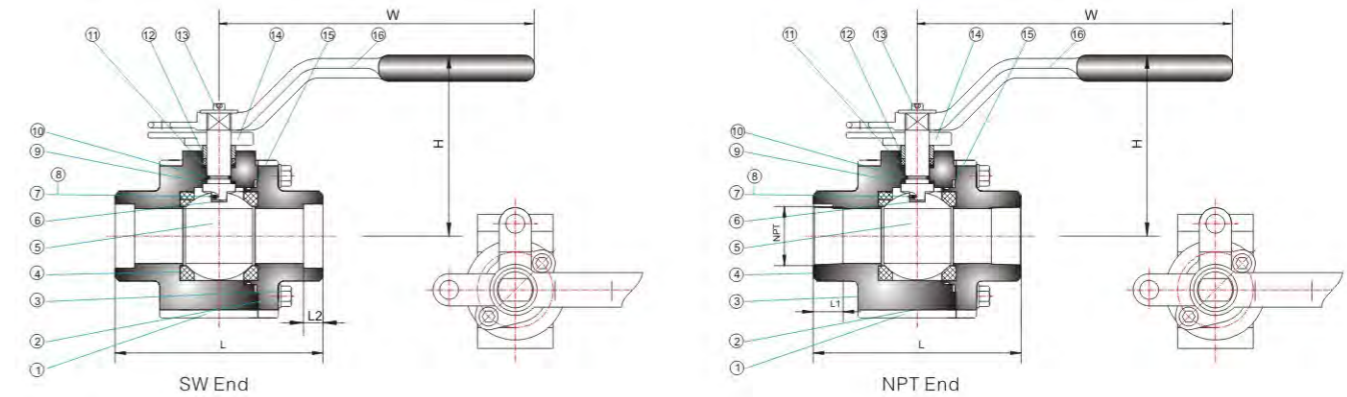
| No. | Part          | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Nut           | A194 2H            | A194 7             | A194 8             | A194 8             |
| 5   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 6   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 8   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 9   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 10  | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 11  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 12  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 13  | Gland         | A276 410           | A276 410           | A182 F304          | A182 F316(L)       |
| 14  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 15  | *O* Ring      | VITON              | VITON              | VITON              | VITON              |
| 16  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 17  | Handle        | WCB                | WCB                | WCB                | WCB                |

Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.

**Dimension and Weight**

| Size |    | 1/2" | 3/4" | 1"  | 1 1/2" | 2"   |
|------|----|------|------|-----|--------|------|
| L    | mm | 216  | 229  | 254 | 305    | 371  |
| H    | mm | 75   | 90   | 100 | 135    | 145  |
| W    | mm | 150  | 180  | 230 | 300    | 300  |
| WT   | kg | 2.9  | 5.0  | 8.2 | 15.1   | 19.1 |

**FORGED STEEL  
FLOATING BALL VALVE  
FE Series-2PCS**  
800LB  
SW/NPT Ends



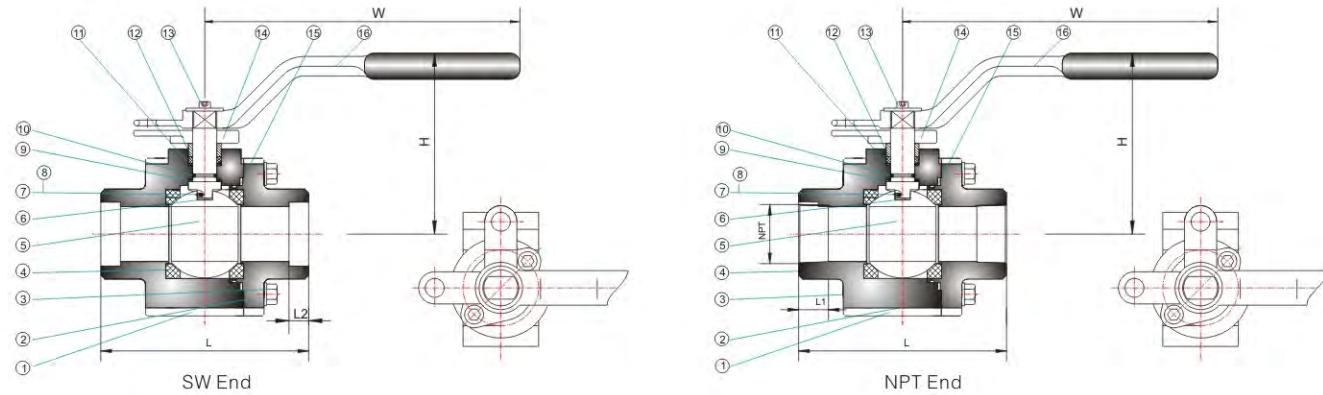
**Material Specifications**

| No. | Part Name     | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 5   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 6   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 8   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 9   | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 10  | *O* Ring      | VITON              | VITON              | VITON              | VITON              |
| 11  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 12  | Gland         | A276 410           | A276 410           | A182 F304          | A182 F316(L)       |
| 13  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 14  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 15  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 16  | Handle        | WCB                | WCB                | WCB                | WCB                |

Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.

**Dimension and Weight(SW/SCREWED END)**

| Size |    | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   |
|------|----|------|------|-----|--------|--------|------|
| L    | mm | 95   | 108  | 123 | 130    | 151    | 167  |
| H    | mm | 80   | 90   | 105 | 110    | 140    | 150  |
| W    | mm | 150  | 180  | 230 | 230    | 300    | 300  |
| WT   | kg | 2.4  | 4.2  | 6.8 | 8.9    | 12.6   | 15.9 |



Material Specifications

| No. | Part Name     | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 5   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 6   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 8   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 9   | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 10  | *O* Ring      | VITON              | VITON              | VITON              | VITON              |
| 11  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 12  | Gland         | A276 410           | A276 410           | A182 F304          | A182 F316(L)       |
| 13  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 14  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 15  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 16  | Handle        | WCB                | WCB                | WCB                | WCB                |

Note: Other materials are available upon request.  
CS=Carbon Steel; AS=Alloy Steel; SS=Stainless Steel.

Dimension and Weight(SW/SCREWED END)

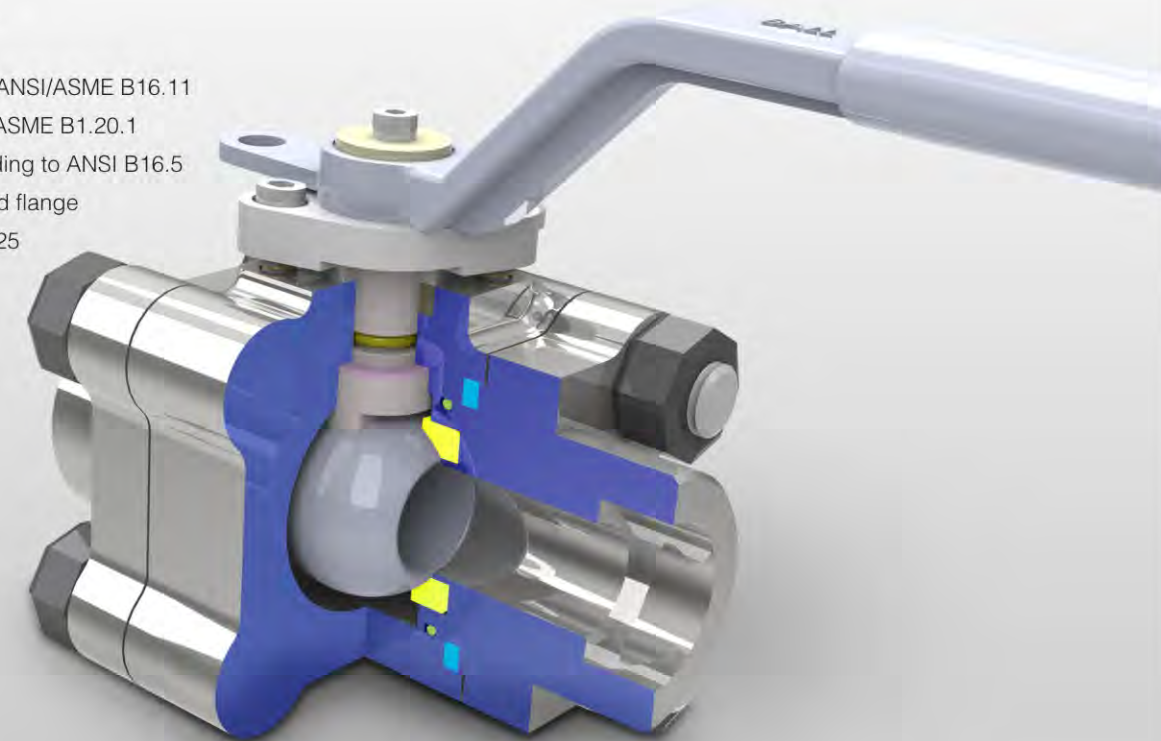
| Size |    | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   |
|------|----|------|------|-----|--------|--------|------|
| L    | mm | 95   | 108  | 123 | 130    | 151    | 167  |
| H    | mm | 80   | 90   | 105 | 110    | 140    | 150  |
| W    | mm | 150  | 180  | 230 | 230    | 300    | 300  |
| WT   | kg | 2.4  | 4.2  | 6.8 | 8.9    | 12.6   | 15.9 |

FORGED STEEL  
FLOATING BALL VALVE  
**FF Series-3PCS**

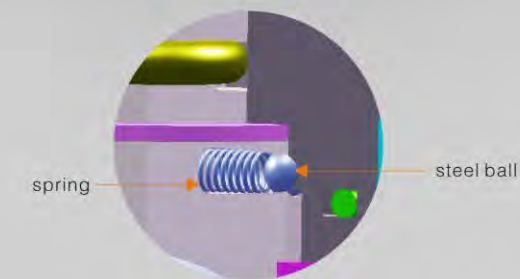
Design Features

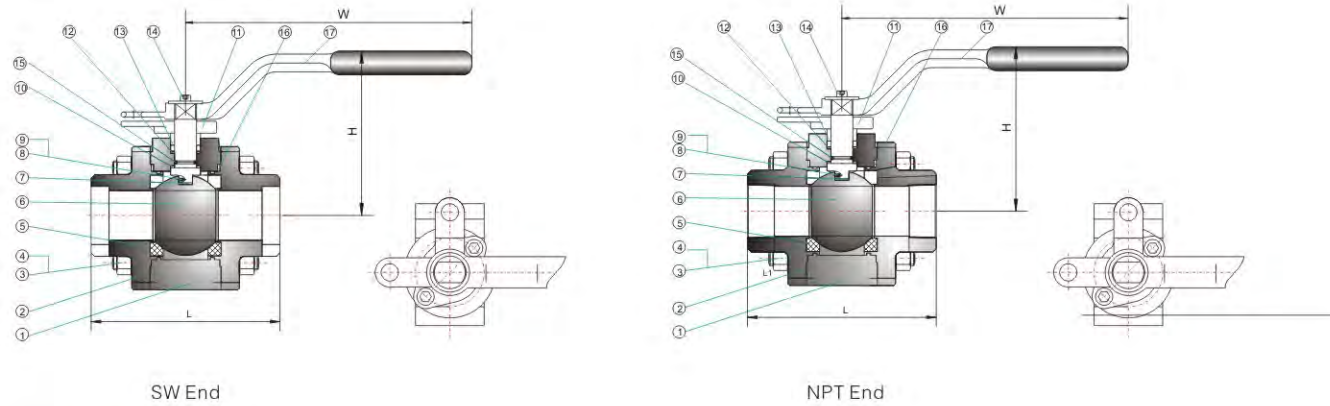
- Full port or reduced port
- Fire safe tested design
- Anti-static design
- Anti blow out stem
- Integral locking device

- Socket welded ends to ANSI/ASME B16.11
- Screwed ends to ANSI/ASME B1.20.1
- Flanges(RF/RTJ) according to ANSI B16.5
- Integral flange or welded flange
- BW ends to ASME B16.25



Anti-Static Device



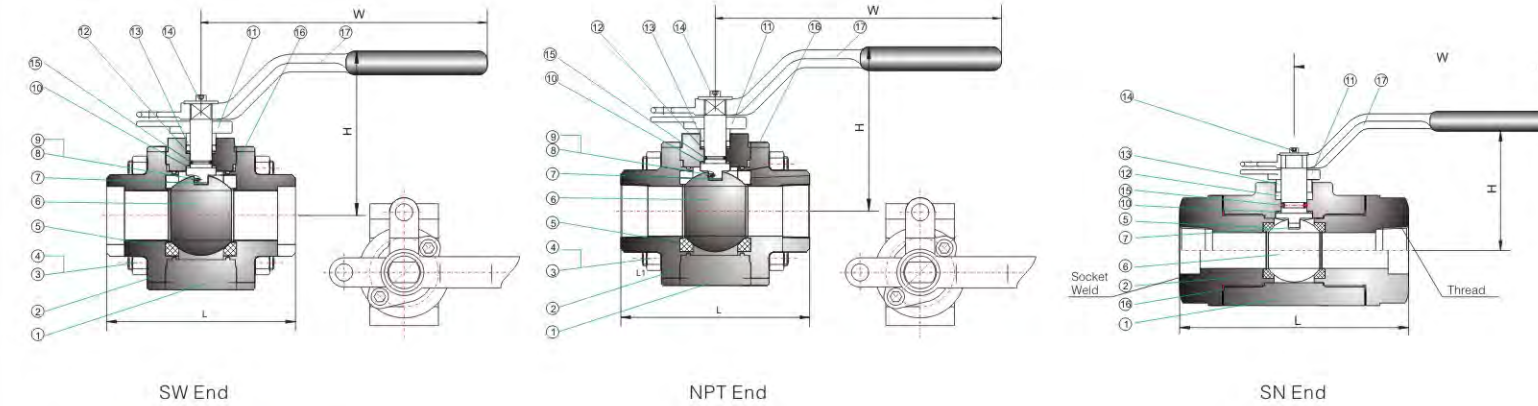


Material Specifications

| No. | Part          | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Nut           | A194 2H            | A194 7             | A194 8             | A194 8             |
| 5   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 6   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 8   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 9   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 10  | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 11  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 12  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 13  | Gland         | A276 410           | A276 410           | A182 F304          | A182 F316(L)       |
| 14  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 15  | *O* Ring      | VITON              | VITON              | VITON              | VITON              |
| 16  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 17  | Handle        | WCB                | WCB                | WCB                | WCB                |

Dimension and Weight

| Size      |    | 3/8" | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"  |
|-----------|----|------|------|------|-----|--------|--------|-----|
| L(SW/NPT) | mm | 100  | 100  | 113  | 128 | 135    | 156    | 172 |
| H         | mm | 80   | 80   | 90   | 105 | 110    | 140    | 150 |
| W         | mm | 150  | 150  | 180  | 230 | 230    | 300    | 300 |
| WT        | kg | 2    | 2.5  | 4.3  | 6.9 | 9      | 12.7   | 16  |



Material Specifications

| No. | Part          | CS to ASTM         | AS to ASTM         | SS to ASTM         |                    |
|-----|---------------|--------------------|--------------------|--------------------|--------------------|
|     |               | Type A105N         | Type LF2           | Type F304          | Type F316(L)       |
| 1   | Body          | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 2   | Bonnet        | A105N              | A350 LF2           | A182 F304          | A182 F316(L)       |
| 3   | Bolt          | A193 B7            | A320 L7            | A193 B8            | A193 B8            |
| 4   | Nut           | A194 2H            | A194 7             | A194 8             | A194 8             |
| 5   | Seat          | RPTFE              | RPTFE              | RPTFE              | RPTFE              |
| 6   | Ball          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 7   | Stem          | F316               | A182 F6a           | A182 F304          | A182 F316(L)       |
| 8   | Spring        | SS304              | SS304              | SS304              | SS304              |
| 9   | Steel Ball    | SS304              | SS304              | SS304              | SS304              |
| 10  | Thrust Collar | PTFE               | PTFE               | PTFE               | PTFE               |
| 11  | Holding Plate | WCB                | WCB                | SS304              | SS316              |
| 12  | Packing       | Graphite           | Graphite           | Graphite           | Graphite           |
| 13  | Gland         | A276 410           | A276 410           | A182 F304          | A182 F316(L)       |
| 14  | Screwed       | CS                 | CS                 | SS                 | SS                 |
| 15  | *O* Ring      | VITON              | VITON              | VITON              | VITON              |
| 16  | Gasket        | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS304+Graphite | spw.SS316+Graphite |
| 17  | Handle        | WCB                | WCB                | WCB                | WCB                |

Dimension and Weight

| Size      |    | 3/8" | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"  |
|-----------|----|------|------|------|-----|--------|--------|-----|
| L(SW/NPT) | mm | 100  | 100  | 113  | 128 | 135    | 156    | 172 |
| H         | mm | 80   | 80   | 90   | 105 | 110    | 140    | 150 |
| W         | mm | 150  | 150  | 180  | 230 | 230    | 300    | 300 |
| WT        | kg | 2    | 2.5  | 4.3  | 6.9 | 9      | 12.7   | 16  |

### Seat

| Properties            |                                      | PTFE                     | NYLON                       | PEEK                        | PCTFE      | DEVLON V-API                |
|-----------------------|--------------------------------------|--------------------------|-----------------------------|-----------------------------|------------|-----------------------------|
| Temperature Range ° F |                                      | -328 ~ 428               | -58 ~ 248                   | -148 ~ 500                  | -328 ~ 302 | -148 ~ 302                  |
| Temperature Range ° C |                                      | -200 ~ 220               | -50 ~ 120                   | -100 ~ 260                  | -200 ~ 150 | -100 ~ 150                  |
| Pressure rating       |                                      | 150 ~ 600                | 150 ~ 1500                  | 150 ~ 2500                  | 150 ~ 1500 | 150 ~ 1500                  |
| Mechanical Property   | Hardness(D)                          | 58                       | 72                          | 88                          | 85         | 78                          |
|                       | Tensile Strength(Mpa)                | 14 ~ 34                  | 55.2                        | 134                         | 35.9       | 79.9                        |
|                       | Tensile Elongation(break,%)          | 350                      | 250                         | 2.2                         | 150        | 5.4                         |
| Physical Property     | Specific Gravity(g/cm <sup>3</sup> ) | 2.17                     | 1.02                        | 1.44                        | 2.12       | 1.14                        |
|                       | Water Absorption 24hrs(%)            | 0.00                     | 1                           | 0.06                        | 0.00       | 0.1                         |
|                       | Water Absorption saturation          | <0.01                    | 1.6                         | 0.2                         | <0.01      | 3                           |
| Service Application   |                                      | Chemical&low temperature | High pressure & Hydrocarbon | High pressure & temperature | Cryogenic  | High pressure & Hydrocarbon |

### Sealing

| Type                                 | NBR       | HNBR      | VITON     | FFKM      | EPDM      |
|--------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Temperature Range ° F                | -22 ~ 230 | -40 ~ 302 | -4 ~ 392  | -4 ~ 620  | -58 ~ 302 |
| Temperature Range ° C                | -30 ~ 110 | -40 ~ 150 | -20 ~ 200 | -20 ~ 327 | -50 ~ 150 |
| Specific Gravity(g/cm <sup>3</sup> ) | 1.31      | 1.34      | 1.85      | 2         | 0.87      |
| Hardness(shore A)                    | 75        | 75        | 75        | 75        | 75        |

### Flow Coefficient(Cv value)

| Size (inch) | 150LB | 300LB | 600LB | 900LB | 1500LB |
|-------------|-------|-------|-------|-------|--------|
| 1/2         | 25    | 25    | 20    | 16    | 16     |
| 3/4         | 56    | 56    | 48    | 34    | 34     |
| 1           | 95    | 95    | 64    | 55    | 55     |
| 1-1/2       | 308   | 308   | 308   | 165   | 165    |
| 2           | 500   | 430   | 370   | 320   | 320    |
| 3           | 1360  | 1100  | 1020  | 920   |        |
| 4           | 2500  | 2000  | 1850  |       |        |
| 6           | 5300  | 5250  |       |       |        |
| 8           | 10750 | 10100 |       |       |        |
| 10          | 17500 | 16820 |       |       |        |
| 12          | 26750 | 25950 |       |       |        |

\*Other elastomer materials available upon request.

### Notes

- All the sizes are in full port.
- Pressure Ratings are according to B 16.34.

### Method of Calculating Flow

The Flow Coefficient Cv of a valve is the flow rate of water (gallons/minute) through a fully opened valve, with a pressure drop of 1 psi across the valve. To find the flow of liquid through the valve from the Cv, use the following formulas:

#### Liquid Flow:

$$Q_L = C_v(P/G)^{1/2}$$

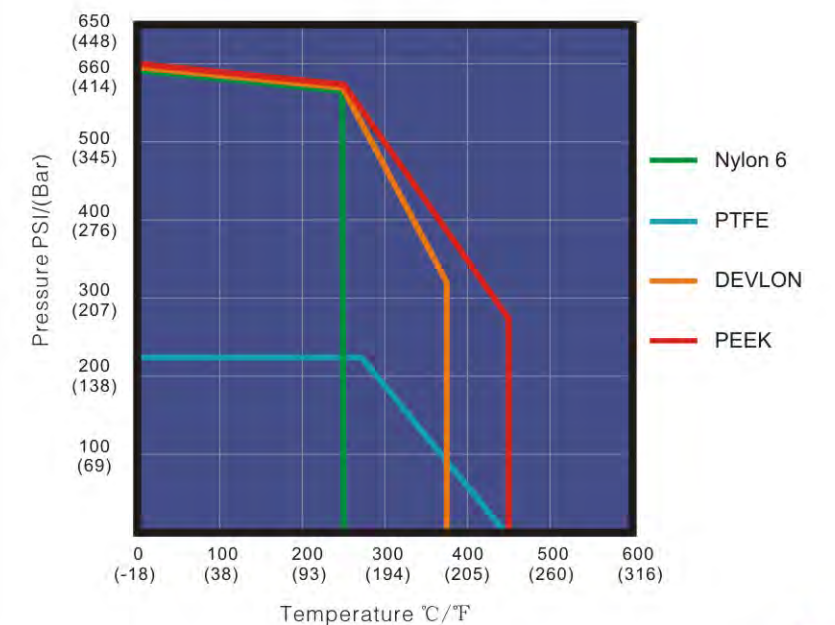
Q<sub>L</sub>=Flow rate of liquid (gal./min)  
P=Differential pressure across the valve  
G=Specific gravity of liquid (for water, G=1)

#### Gas Flow:

$$Q_g = 61C_v(P_2P/g)^{1/2}$$

(For non-critical flow, P/P<1.0)  
Q<sub>g</sub>=Flow rate of gas (CFH at STP)  
P<sub>2</sub>=Outlet pressure(psia)  
g=specific gravity of gas (for air, g=1.0)

Pressure Temperature Chart



| in    | 150LB |         | 300LB |         | 400LB |        | 600LB |        |
|-------|-------|---------|-------|---------|-------|--------|-------|--------|
|       | n.M   | Ft/Lbs  | n.M   | Ft/Lbs  | n.M   | Ft/Lbs | n.M   | Ft/Lbs |
| 1/4   | 5     | 3.69    | 6     | 4.43    | 8     | 5.90   | 12    | 8.86   |
| 3/8   | 5     | 3.69    | 6     | 4.43    | 8     | 5.90   | 12    | 8.86   |
| 1/2   | 6     | 4.43    | 9     | 6.64    | 11    | 8.12   | 16    | 11.81  |
| 3/4   | 10    | 7.38    | 12    | 8.86    | 14    | 10.33  | 20    | 14.76  |
| 1     | 40    | 11.07   | 40    | 14.76   | 29    | 21.40  | 60    | 31.00  |
| 1-1/4 | 32    | 23.62   | 48    | 35.42   | 45    | 33.21  | 60    | 44.28  |
| 1-1/2 | 50    | 29.52   | 50    | 44.28   | 62    | 45.76  | 70    | 66.42  |
| 2     | 80    | 36.90   | 80    | 51.66   | 90    | 66.42  | 140   | 95.94  |
| 2-1/2 | 90    | 59.04   | 90    | 66.42   | 104   | 76.75  | 200   | 110.70 |
| 3     | 120   | 66.42   | 120   | 88.56   | 138   | 101.84 | 320   | 147.60 |
| 4     | 180   | 132.84  | 170   | 169.74  | 255   | 188.19 | 400   | 273.06 |
| 5     | 340   | 250.92  | 420   | 309.96  |       |        |       |        |
| 6     | 550   | 619.92  | 650   | 686.34  |       |        |       |        |
| 8     | 1100  | 811.80  | 1850  | 1424.34 |       |        |       |        |
| 10    | 1850  | 1476.00 | 4500  | 3321.00 |       |        |       |        |
| 12    | 3200  | 2361.60 |       |         |       |        |       |        |

| in    | 800LB |        | 900LB |        | 1500LB |        | 2500LB |        |
|-------|-------|--------|-------|--------|--------|--------|--------|--------|
|       | n.M   | Ft/Lbs | n.M   | Ft/Lbs | n.M    | Ft/Lbs | n.M    | Ft/Lbs |
| 1/4   | 15    | 11.07  | 15    | 11.07  | 22     | 16.24  | 32     | 23.62  |
| 3/8   | 15    | 11.07  | 15    | 11.07  | 22     | 16.24  | 32     | 23.62  |
| 1/2   | 19    | 14.02  | 20    | 14.76  | 32     | 23.62  | 56     | 41.33  |
| 3/4   | 33    | 24.35  | 35    | 25.83  | 45     | 33.21  | 100    | 73.80  |
| 1     | 65    | 47.97  | 70    | 51.66  | 120    | 88.56  | 190    | 140.22 |
| 1-1/4 | 90    | 66.42  | 100   | 73.80  | 170    | 125.46 | 310    | 228.78 |
| 1-1/2 | 130   | 95.94  | 140   | 103.32 | 189    | 139.48 | 360    | 265.68 |
| 2     | 187   | 138.01 | 200   | 147.60 | 420    | 309.96 |        |        |
| 2-1/2 | 280   | 206.64 | 320   | 236.16 |        |        |        |        |
| 3     | 403   | 297.41 | 431   | 318.08 |        |        |        |        |

Note: The torque exclude safety factor which is 1.2-1.5.

## Product Warranty

Seller will replace without charge or refund the purchase price of products provided by seller which prove to be defective in mater or workmanship, provided in each case that the product is proper installed and is used in the service for which Seller recommends it and that written claim, specifying the alleged defect, is presented to the seller within 18 months from the date of shipment or 12 months after installation, whichever occurs first. Seller shall in no event bear any labor, equipment, engineering or other costs incurred in connection with repair or replacement.

The warranty stated in this paragraph is in lieu of all other warranties, either expressed or implied. With respect to warranties, this paragraph states Buyer's exclusive remedy and seller's exclusive liability.

We confirm spare kit availability during warranty period and periods following the warranty duration.