

## **F14A**

### ***Floating Ball Valve, ASME CLASS 150 / CLASS 300***



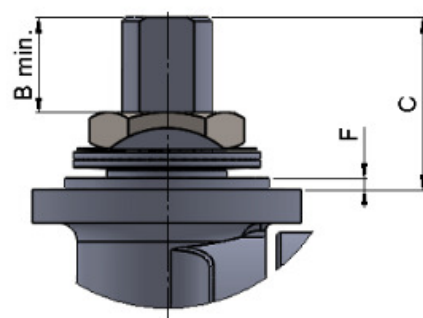
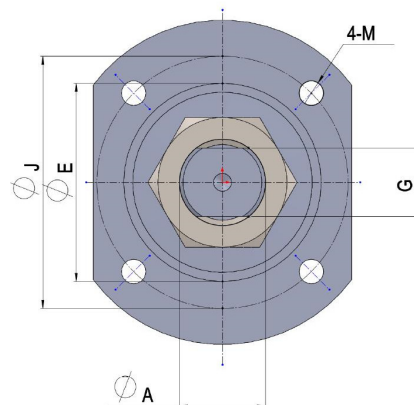
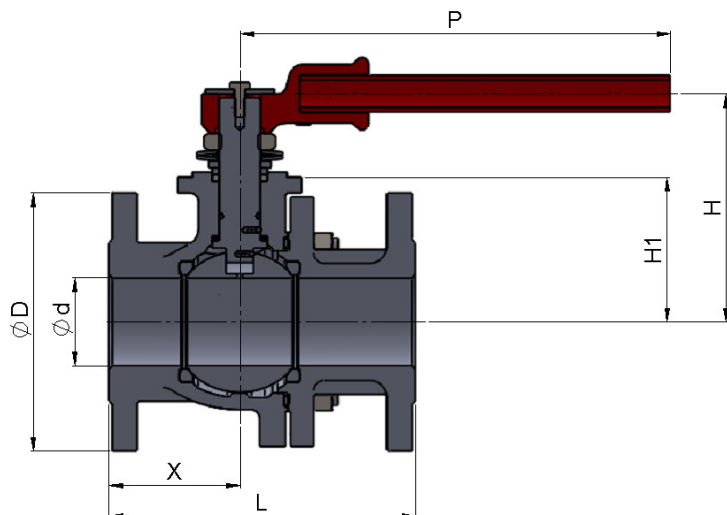
#### **Features**

- Full bore. Split body
- **Design Standards:** ISO 17292 / ASME B16.34 / API 608
- **Flanges:** ASME B16.5, RF
- **Lengths/Face-to-face:** ASME B16.10
- **Leak test:** EN 12266-1 Rate A / API 598
- **Top flange:** ISO 5211
- **Seats:** HPTFE ball seats provide enhanced sealing performance and longer life
- **Stem:** Anti-static and proof Blow-out
- Autoadjustable packing
- NACE MR0175
- Locking device in open and close position

#### **Approvals**

- Fire test Certification: API 607 ed. 7<sup>th</sup> / ISO 10497 ed. 3<sup>rd</sup>
- PED 2014/68/UE approval for CE marked products.
- UKCA 2016
- Fugitive Emission Certification: ISO 15848-1 (2015)
- CRN approval
- Marine Division certificate
- ATEX approval
- SIL IEC 61508 – 2019 Certification
- EAC TR CU

## Dimensions



### Class 150

| Class 150 |                         |     |         |        |              |     |     |      |     |      |       |        |     |    |     |     |     |          |                 |        |
|-----------|-------------------------|-----|---------|--------|--------------|-----|-----|------|-----|------|-------|--------|-----|----|-----|-----|-----|----------|-----------------|--------|
| Size      | General Dimensions [mm] |     |         |        |              |     |     |      |     |      |       |        |     |    |     |     |     |          | Kv              | Weight |
| inch.     | Ød                      | ØD  | L       |        |              | X   | P   | H    | H1  | A    | B     | C      | E   | F  | G   | J   | M   | ISO 5211 | [m³/h]<br>[bar] | [Kg]   |
|           |                         |     | Short*¹ | Long*¹ | KCE Long STD |     |     |      |     |      |       |        |     |    |     |     |     |          |                 |        |
| 1/2"      | 14                      | 90  | 108     | -      | 45,5         | 150 | 90  | 23,5 | 10  | 9,5  | 18    | 25     | 1,5 | 6  | 36  | M5  | F03 | 19       | 2               |        |
| 3/4"      | 19                      | 100 | 117     | -      | 52           | 150 | 95  | 29   | 10  | 8    | 16,5  | 25     | 1,5 | 6  | 36  | M5  | F03 | 40,5     | 2,5             |        |
| 1"        | 25                      | 110 | 127     | -      | 54,5         | 150 | 106 | 30,5 | 12  | 10   | 20,5  | 35     | 2   | 8  | 50  | M6  | F05 | 79,5     | 3,5             |        |
| 1.1/2"    | 38                      | 125 | 165     | -      | 80,5         | 200 | 126 | 61   | 14  | 13,5 | 29    | 35     | 2   | 9  | 50  | M6  | F05 | 208,5    | 7               |        |
| 2"        | 51                      | 150 | 178     | 203    | 76           | 250 | 133 | 84   | 24  | 24   | 46    | 55     | 3   | 19 | 70  | M8  | F07 | 433      | 12,3            |        |
| 3"        | 76                      | 190 | 203     | 241    | 90           | 250 | 153 | 104  | 24  | 24   | 46    | 55     | 3   | 19 | 70  | M8  | F07 | 1062     | 23              |        |
| 4"        | 102                     | 230 | 229     | 305    | 114,5        | 500 | 201 | 130  | 36  | 38,5 | 66    | 70     | 3   | 22 | 102 | M10 | F10 | 2158     | 40              |        |
| 6"        | 152                     | 280 | 267     | 394    | 134          | 750 | 240 | 169  | 36  | 38,5 | 66    | 70     | 3   | 22 | 102 | M10 | F10 | 5662     | 76              |        |
| 8" *      | 203                     | 343 | -       | 457    | -            | 228 | -   | 342  | 231 | 50** | 42**  | 64,5** | 100 | 3  | 30* | 140 | M16 | F14      | 9201            | 180    |
| 10" *     | 254                     | 406 | -       | 533    | -            | 266 | -   | 378  | 286 | 65   | 171,5 | 174,5  | 130 | 3  | 18  | 165 | M20 | F16      | 15269           | 255    |
| 12" *     | 305                     | 485 | -       | 610    | -            | 305 | -   | 440  | 315 | 65   | 171,5 | 174,5  | 130 | 3  | 18  | 165 | M20 | F16      | 22971           | 360    |

(\*) Manual Gear  
(\*\*) Bare stem

(\*) According to B16.10

### Class 300

| Class 300 |                         |     |                    |                   |       |      |     |      |      |       |        |     |     |     |     |     |          |                 |        |
|-----------|-------------------------|-----|--------------------|-------------------|-------|------|-----|------|------|-------|--------|-----|-----|-----|-----|-----|----------|-----------------|--------|
| Size      | General Dimensions [mm] |     |                    |                   |       |      |     |      |      |       |        |     |     |     |     |     |          | Kv              | Weight |
| inch.     | Ød                      | ØD  | L                  |                   | X     | P    | H   | H1   | A    | B     | C      | E   | F   | G   | J   | M   | ISO 5211 | [m³/h]<br>[bar] | [Kg]   |
|           |                         |     | Short <sup>1</sup> | Long <sup>1</sup> |       |      |     |      |      |       |        |     |     |     |     |     |          |                 |        |
| 1/2"      | 14                      | 95  | 140                |                   | 49,5  | 150  | 90  | 23,5 | 10   | 9,5   | 18     | 25  | 1,5 | 6   | 36  | M5  | F03      | 16,5            | 2,8    |
| 3/4"      | 19                      | 115 | 152                |                   | 62    | 150  | 95  | 29   | 10   | 8     | 16,5   | 25  | 1,5 | 6   | 36  | M5  | F03      | 35,5            | 3,5    |
| 1"        | 25                      | 125 | 165                |                   | 66    | 150  | 106 | 30,5 | 12   | 10    | 20,5   | 35  | 2   | 8   | 50  | M6  | F05      | 70              | 5,2    |
| 1.1/2"    | 38                      | 155 | 190                |                   | 96    | 200  | 126 | 61   | 14   | 13,5  | 29     | 35  | 2   | 9   | 50  | M6  | F05      | 194,5           | 10,5   |
| 2"        | 51                      | 165 | 216                |                   | 106   | 350  | 133 | 84   | 24   | 24    | 46     | 55  | 3   | 19  | 70  | M8  | F07      | 392,5           | 15,5   |
| 3"        | 76                      | 210 | 283                |                   | 127   | 350  | 153 | 104  | 24   | 24    | 46     | 55  | 3   | 19  | 70  | M8  | F07      | 900             | 31     |
| 4"        | 102                     | 255 | 305                |                   | 152,5 | 500  | 201 | 130  | 36   | 38,5  | 66     | 70  | 3   | 22  | 102 | M10 | F10      | 1871            | 55     |
| 6"        | 152                     | 320 | 403                |                   | 201,5 | 1000 | 240 | 169  | 36   | 38,5  | 66     | 70  | 3   | 22  | 102 | M10 | F10      | 4608            | 115    |
| 8" *      | 203                     | 381 | -                  | 502               | 251   | -    | 342 | 231  | 50** | 42**  | 64,5** | 100 | 3   | 30* | 140 | M16 | F14      | 8779            | 239    |
| 10" *     | 254                     | 445 | -                  | 568               | 284   | -    | 378 | 286  | 65   | 171,5 | 174,5  | 130 | 3   | 18  | 165 | M20 | F16      | 14791           | 297    |
| 12" *     | 305                     | 521 | -                  | 648               | 324   | -    | 440 | 315  | 65   | 171,5 | 174,5  | 130 | 3   | 18  | 165 | M20 | F16      | 22287           | 450    |

(\*) Manual Gear  
(\*\*) Bare stem

(\*) According to B16.10

## Operation Torque (BTO)

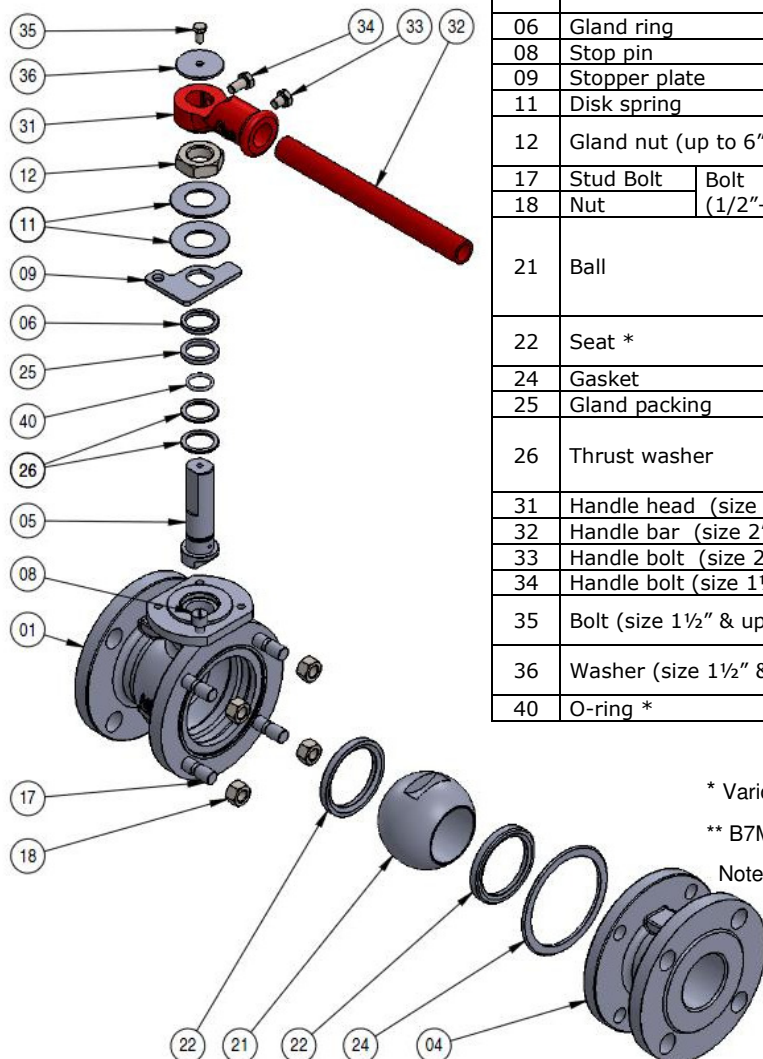
| Valve Size | Maximum differential pressure [barg] / Operation torque [Nm] |      |      |      |      |      |      |      |      |      | MAST (Nm) |
|------------|--------------------------------------------------------------|------|------|------|------|------|------|------|------|------|-----------|
|            | 5                                                            | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 51   |           |
| 1/2"       | 2,5                                                          | 2,5  | 2,5  | 2,7  | 2,7  | 2,7  | 2,7  | 3    | 3    | 3    | 11,1      |
| 3/4"       | 5                                                            | 5,1  | 5,5  | 5,5  | 5,5  | 5,7  | 5,9  | 5,9  | 6,2  | 6,2  | 11,1      |
| 1"         | 9                                                            | 9,5  | 9,7  | 10,1 | 10,1 | 10,1 | 10,1 | 10,3 | 10,3 | 10,5 | 23,1      |
| 1 1/2"     | 14                                                           | 14   | 14,5 | 14,5 | 14,5 | 14,5 | 15   | 15   | 15,5 | 17,5 | 32,2      |
| 2"         | 37                                                           | 37,5 | 38   | 38   | 39,5 | 39,5 | 40,5 | 42,5 | 44,5 | 48   | 230       |
| 3"         | 50                                                           | 51   | 58   | 60   | 63   | 65   | 70   | 75   | 85   | 95   | 230       |
| 4"         | 110                                                          | 115  | 118  | 120  | 145  | 160  | 170  | 180  | 190  | 195  | 566       |
| 6"         | 240                                                          | 245  | 250  | 260  | 265  | 285  | 350  | 370  | 405  | 410  | 566       |
| 8"         | 400                                                          | 420  | 475  | 500  | 550  | 585  | 620  | 660  | 705  | 750  | 1652      |
| 10"        | 1200                                                         | 1300 | 1350 | 1400 | 1440 | 1490 | 1525 | 1540 | 1565 | 1600 | 3894      |
| 12"        | 1825                                                         | 1910 | 1950 | 2000 | 2010 | 2025 | 2040 | 2070 | 2085 | 2100 | 3894      |

Note 1: Safety factor not included.

Note 2: Values are for clean, static water at ambient temperature.

Note 3: MAST values with 316 stem material.

## Material List



| Pos. | Description                    | Carbon Steel                                                                    | Stainless Steel                                                                 |
|------|--------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 01   | Body                           | ASTM A216 Gr.WCC                                                                | ASTM A351 Gr.CF8M / ASTM A351 Gr.CF3M                                           |
| 04   | Cap                            | ASTM A216 Gr.WCC                                                                | ASTM A351 Gr.CF8M / ASTM A351 Gr.CF3M                                           |
| 05   | Antistatic stem*               | ASTM A182 Gr.F316 / ASTM A479 Type 316                                          | ASTM A182 Gr.F316 / ASTM A479 Type 316                                          |
| 06   | Gland ring                     | ASTM A479 Type 316                                                              | ASTM A479 Type 316                                                              |
| 08   | Stop pin                       | Stainless Steel                                                                 | Stainless Steel                                                                 |
| 09   | Stopper plate                  | Stainless Steel                                                                 | Stainless Steel                                                                 |
| 11   | Disk spring                    | Stainless Steel                                                                 | Stainless Steel                                                                 |
| 12   | Gland nut (up to 6")           | Stainless Steel (1/2" - 2")<br>Carbon Steel (3" - 6")                           | Stainless Steel                                                                 |
| 17   | Stud Bolt                      | ASTM A193 Gr.B7M                                                                | ASTM A193 Gr.B8M**                                                              |
| 18   | Nut                            | ASTM A194 Gr.2HM<br>(1/2" - 1.1/2")                                             | ASTM A194 Gr.8M**                                                               |
| 21   | Ball                           | ASTM A479 Type 316<br>EN 10213 1.4408<br>ASTM A351 Gr.CF8M<br>ASTM A182 Gr.F316 | ASTM A479 Type 316<br>EN 10213 1.4408<br>ASTM A351 Gr.CF8M<br>ASTM A182 Gr.F316 |
| 22   | Seat *                         | HPTFE (1/2" - 8")<br>PTFE (10" - 12")                                           | HPTFE (1/2" - 8")<br>PTFE (10" - 12")                                           |
| 24   | Gasket                         | Graphite + 316L                                                                 | Graphite + 316L                                                                 |
| 25   | Gland packing                  | Graphite                                                                        | Graphite                                                                        |
| 26   | Thrust washer                  | PTFE + 25% Graphite<br>(size 1/2", 3/4" & 1")<br>PTFE (size 1 1/2" & up)        | PTFE + 25% Graphite<br>(size 1/2", 3/4" & 1")<br>PTFE (size 1 1/2" & up)        |
| 31   | Handle head (size 2" & up)     | Ductile Iron                                                                    | Ductile Iron                                                                    |
| 32   | Handle bar (size 2" & up)      | Carbon Steel                                                                    | Carbon Steel                                                                    |
| 33   | Handle bolt (size 2" & up)     | Stainless Steel                                                                 | Stainless Steel                                                                 |
| 34   | Handle bolt (size 1 1/2" & up) | Stainless Steel                                                                 | Stainless Steel                                                                 |
| 35   | Bolt (size 1 1/2" & up)        | Stainless Steel (1 1/2" - 2")<br>Carbon Steel (3" - 6")                         | Stainless Steel                                                                 |
| 36   | Washer (size 1 1/2" & up)      | Stainless Steel (1 1/2" - 2")<br>Carbon Steel (3" - 6")                         | Stainless Steel                                                                 |
| 40   | O-ring *                       | FKM                                                                             | FKM                                                                             |

\* Various stem, seats and O-rings materials are available as optional.

\*\* B7M/2HM+Deltatone for 8" A300, 10" and 12".

Note: Components arrangement may vary depending on the size.

## P-T Rating

| Class 150                          |           |              |           |      |
|------------------------------------|-----------|--------------|-----------|------|
| Pressure-Temperature Ratings [bar] |           |              |           |      |
| Size                               | 1/2" ~ 8" |              | 10" ~ 12" |      |
| Temperature                        | WCC       | CF8M – CF3M* | WCC       | CF8M |
| -29°C ~ 38°C                       | 19,8      | 19           | 19,8      | 19   |
| 200°C                              | 13,8      | 13,7         | 8,3       | 8,3  |

| Class 300                          |               |      |      |            |         |            |         |            |           |      |
|------------------------------------|---------------|------|------|------------|---------|------------|---------|------------|-----------|------|
| Pressure-Temperature Ratings [bar] |               |      |      |            |         |            |         |            |           |      |
| Size                               | 1/2" ~ 1 1/2" |      | 2"   |            | 3" ~ 4" |            | 6" ~ 8" |            | 10" ~ 12" |      |
| Temperature                        | WCC           | CF8M | WCC  | CF8M/CF3M* | WCC     | CF8M/CF3M* | WCC     | CF8M/CF3M* | WCC       | CF8M |
| -29°C ~ 38°C                       | 51,7          | 49,6 | 51,7 | 49,6       | 51,7    | 49,6       | 51,7    | 49,6       | 25        |      |
| 200°C                              | 37,5          |      | 26,2 |            | 18,7    |            | 14      |            | 8,3       |      |

\*CF3M → This material is available in the following sizes 2", 3" 4" and 6"

