

C73

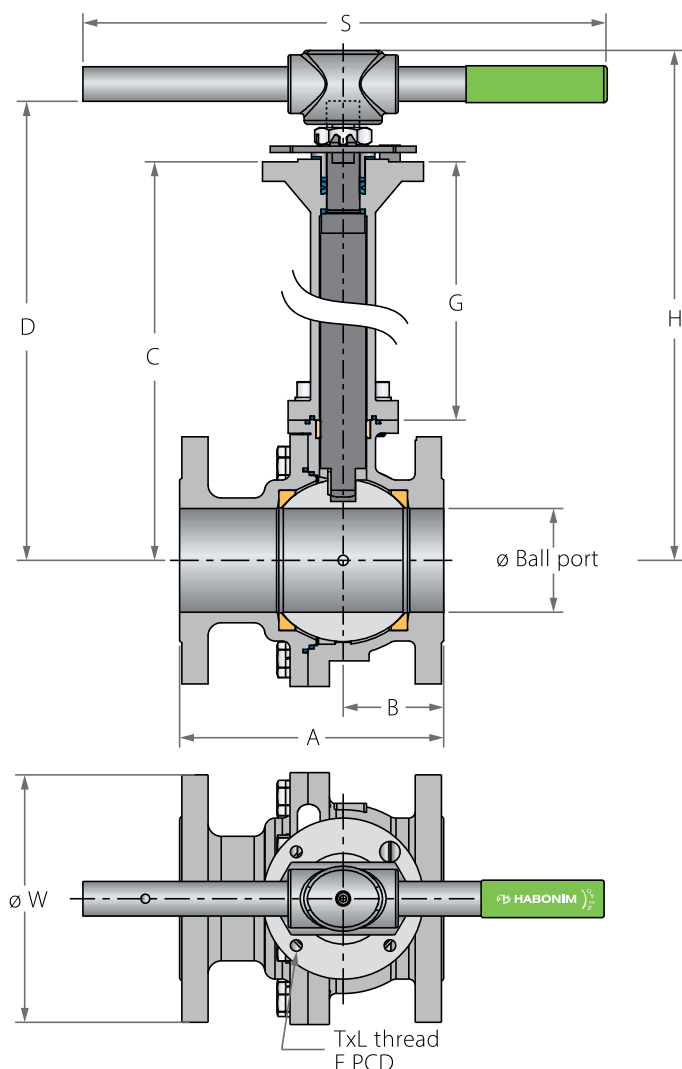
C74

C77

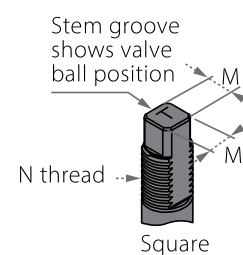
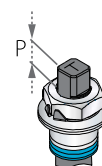
3"-8"<sup>(1)</sup> | DN80-DN200  
CLASS 150/300/PN 16

## Cryogenic Flanged Full Port Floating Ball

### Valve dimensions



### Preparation for actuation



| Full Port | Unit | Ball port | A <sub>73</sub> | A <sub>74</sub> | A <sub>77</sub> |      | B     | Standard design |       |       |       | 6.0" bonnet |       |       |       | S     | W     | M     | M DD  | N                 | P             | F    | TxL    | Weight kg/lb |        | Kv   |
|-----------|------|-----------|-----------------|-----------------|-----------------|------|-------|-----------------|-------|-------|-------|-------------|-------|-------|-------|-------|-------|-------|-------|-------------------|---------------|------|--------|--------------|--------|------|
|           |      |           |                 |                 | F1,F5           | F4   |       | C               | D     | G     | H     | C           | D     | G     | H     |       |       |       |       |                   |               |      |        | Std.         | 6.0"   |      |
| DN80      | mm   | 80        | 203             | 282             | 310             | 180  | 77.5  | 441.5           | 488.1 | 343.5 | 538.6 | 250.4       | 297   | 152.4 | 347.5 | 610   | 190.5 | 18.9  | 15.9  | 1"-14<br>UNS-2A   | 16.7<br>(F10) | 102  | M10X15 | 27           | 25     | 1111 |
| 3"        | inch | 3.15      | 7.99            | 11.1            | 12.2            | 7.09 | 3.05  | 17.38           | 19.22 | 13.52 | 21.2  | 9.86        | 11.69 | 6     | 13.68 | 24.02 | 7.5   | 0.74  | 0.63  | 0.66              |               | 4.02 |        | 59.4         | 41.44  | 1300 |
| DN100     | mm   | 100       | 229             | 305             | 350             | 190  | 84.5  | 467.5           | 514.1 | 343.5 | 566.6 | 276.4       | 323   | 152.4 | 375.5 | 610   | 230   | 18.9  | 15.9  | 1"-14<br>UNS-2A   | 16.7<br>(F10) | 102  | M10X15 | 44           | 42     | 2051 |
| 4"        | inch | 3.94      | 9.02            | 12.01           | 13.78           | 7.48 | 3.33  | 18.41           | 20.24 | 13.52 | 22.31 | 10.88       | 12.72 | 6     | 14.78 | 24.02 | 9.06  | 0.74  | 0.63  | 0.66              |               | 4.02 |        | 67.22        | 64.58  | 2379 |
| DN150     | mm   | 150       | 394             | 404             | 350             | OPT  | 163.5 | 564             | 633.5 | 385   | -     | 331.4       | 400.9 | 152.4 | -     | -     | 279.4 | 28.45 | 23.75 | 1-½"-12<br>UNF-2A | 26.2<br>(F12) | 125  | M12X15 | 97           | 93.5   | 4615 |
| 6"        | inch | 5.91      | 15.51           | 15.91           | 1378            | OPT  | 6.44  | 22.2            | 24.94 | 15.16 | -     | 13.05       | 15.78 | 6     | -     | -     | 11    | 1.12  | 0.94  | 1.03              |               | 4.92 |        | 154.28       | 145.24 | 5400 |
| DN200     | mm   | 200       | 457             | 502             | -               | -    | 242.6 | 627             | 627   | 385   | -     | 394.4       | 463.9 | 152.4 | -     | -     | 343   | 35.9  | 35.9  | 2"-UN-2A          | 40<br>(F14)   | 140  | M16X20 | 210          | 203    | 7949 |
| 8"        | inch | 7.87      | 17.99           | 19.76           | -               | -    | 9.55  | 24.69           | 24.69 | 15.16 | -     | 15.53       | 18.26 | 6     | -     | -     | 13.5  | 1.41  | 1.41  | 1.57              |               | 5.51 |        | 231.42       | 222.38 | 9300 |

<sup>(1)</sup> Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

<sup>(1)</sup> C77 up to 6"

C73

C74

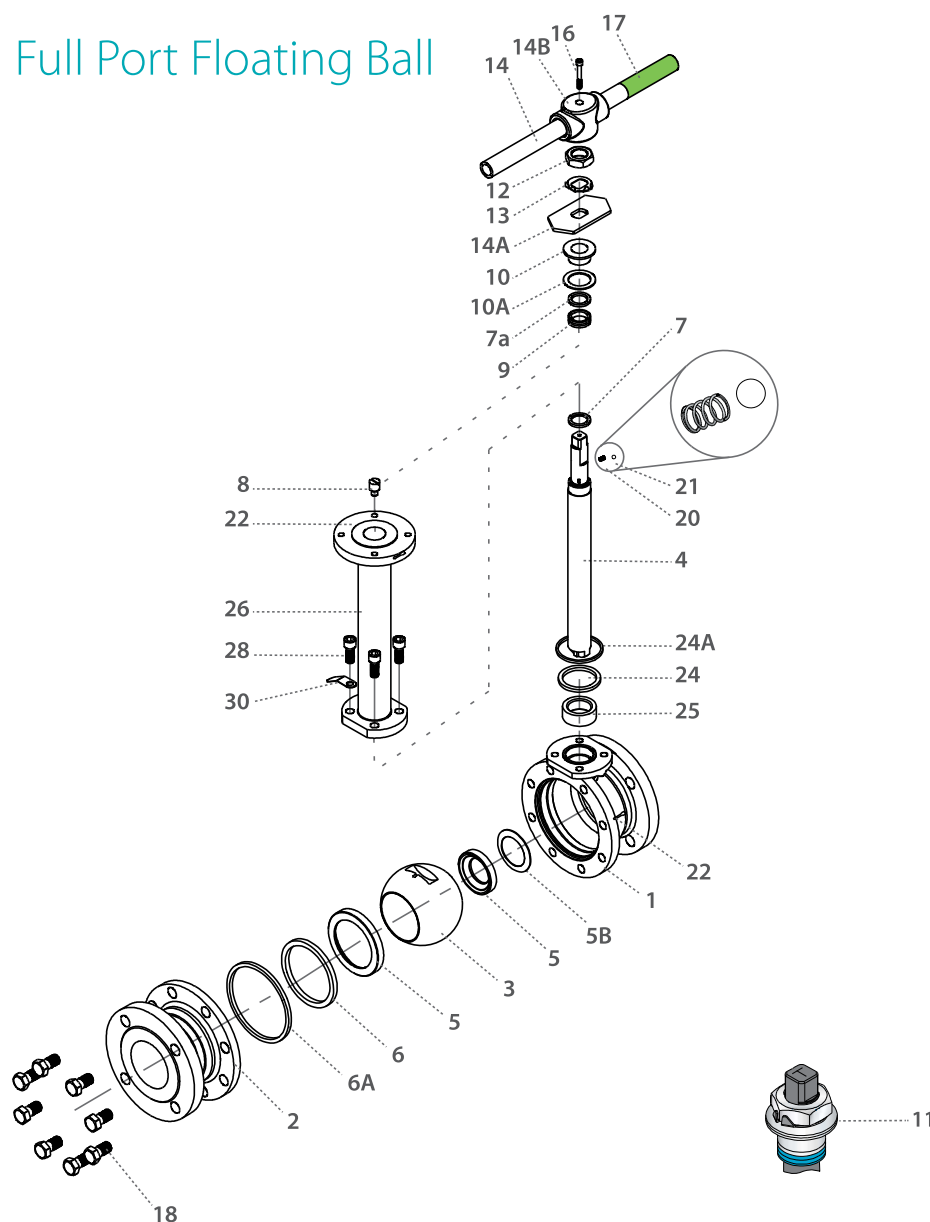
C77

3"-8"<sup>(1)</sup> | DN80-DN200  
CLASS 150/300/PN 16



## Cryogenic Flanged Full Port Floating Ball

### Components & materials



| Item | Description          | Material specifications | Qty. |
|------|----------------------|-------------------------|------|
| 1    | Body                 | Acc. Ordering Code      | 1    |
| 2    | End                  | Acc. Ordering Code      | 1    |
| 3    | Ball                 | Acc. Ordering Code      | 1    |
| 4    | Stem                 | Acc. Ordering Code      | 1    |
| 5*   | Seat                 | Acc. Ordering Code      | 2    |
| 5B   | Upstream seat spring | Inconel 718             | 1    |
| 6*   | Inner seal           | TFM                     | 1    |
| 6A*  | Outer seal           | Acc. Ordering Code      | 1    |
| 7*   | Stem thrust seal     | PCTFE                   | 1    |
| 7a*  | Anti-abrasion ring   | PCTFE                   | 1    |
| 8    | Stop pin             | S. Steel                | 1    |
| 9*   | Stem seal            | TFM                     | 1    |
| 10   | Follower             | S. Steel                | 1    |
| 10A  | Slide bearing        | S. Steel                | 1    |
| 11   | Disc spring          | S. Steel                | 2    |
| 12   | Stem nut             | S. Steel                | 1    |
| 13   | Tab lock washer      | S. Steel                | 1    |
| 14** | Handle               | S. Steel                | 1    |
| 14A  | Stop plate           | S. Steel                | 1    |

| Item | Description         | Material specifications | Qty. |
|------|---------------------|-------------------------|------|
| 14B  | Wrench head         | S. Steel                | 1    |
| 16   | Wrench bolt         | S. Steel                | 1    |
| 17   | Sleeve              | PVC                     | 1    |
| 18   | Body bolt           | S. Steel                | 8-10 |
| 20   | Anti-static spring  | S. Steel                | 2    |
| 21   | Anti-static plunger | S. Steel                | 2    |
| 22   | Arrow flow          | S. Steel                | 2    |
| 23   | Tag (not shown)     | S. Steel                | 1    |
| 24*  | Bonnet inner seal   | TFM                     | 1    |
| 24A* | Bonnet outer seal   | Acc. Ordering Code      | 1    |
| 25*  | Stem bearing        | PTFE                    | 1    |
| 26   | Bonnet              | S. Steel                | 1    |
| 28   | Bolt                | S. Steel                | 4    |
| 30   | Dog tag             | S. Steel                | 1    |

\* Repair kit components

\*\* Gear operator should be used for size 6" DN150 and above (handle components are not included)

<sup>(1)</sup> C77 up to 6"

C31

C32

C73

C74

C77

C78



## Cryogenic Flanged Full Port Floating Ball - Ordering Code System

"Mandatory option" options are marked with **green background** | "Standard offer" options are marked with **light green background**

|      |   |          |   |   |   |        |   |        |    |              |    |                  |                  |                |    |                   |    |    |    |                     |    |    |    |    |    |    |    |    |    |
|------|---|----------|---|---|---|--------|---|--------|----|--------------|----|------------------|------------------|----------------|----|-------------------|----|----|----|---------------------|----|----|----|----|----|----|----|----|----|
| 1    | 2 | 3        | 4 | 5 | 6 | 7      | 8 | 9      | 10 | 11           | 12 | 13               | 14               | 15             | 16 | 17                | 18 | 19 | 20 | 21                  | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 6    | 0 |          |   | F | C | 7      | 3 | W      | -  | 6            | 6  | 6                | M                | C              | G  |                   | /  | X  | B  | W                   |    | -  |    |    |    |    |    |    |    |
| Size |   | Features |   |   |   | Series |   | Design |    | Body/<br>End |    | Ball<br>material | Seat<br>material | Seat/<br>Seals |    | End<br>connection |    |    |    | Special<br>features |    |    |    |    |    |    |    |    |    |

| Size (1-2) |        |     |
|------------|--------|-----|
| Code       | inch   | mm  |
| 05         | 1/2"   | 15  |
| 07         | 3/4"   | 20  |
| 10         | 1"     | 25  |
| 12*        | 1 1/4" | 32  |
| 15         | 1 1/2" | 40  |
| 20         | 2"     | 50  |
| 25*        | 2 1/2" | 65  |
| 30         | 3"     | 80  |
| 40         | 4"     | 100 |
| 60         | 6"     | 150 |
| 80         | 8"     | 200 |

\* only for series 73/78

| Features (3-6)     |                                         |
|--------------------|-----------------------------------------|
| C                  | <b>Cryogenic</b>                        |
| F                  | Fire safe                               |
| N                  | Control service                         |
| Series (7-8)       |                                         |
| C31                | <b>ANSI #150 std. port</b>              |
| C32                | <b>ANSI #300 std. port</b>              |
| C73                | <b>ANSI #150 full port</b>              |
| C74                | <b>ANSI #300 full port</b>              |
| C77                | <b>DIN PN 16 full port</b>              |
| C78                | <b>DIN PN 40 full port</b>              |
| Design (9)         |                                         |
| W                  | <b>Total HermetiX Integrity package</b> |
| Body material (11) |                                         |
| 6                  | <b>CF8M</b>                             |
| 1                  | Bronze                                  |
| 7                  | Monel                                   |
| End material (12)  |                                         |
| 6                  | <b>CF8M</b>                             |
| 1                  | Bronze                                  |
| 7                  | Monel                                   |

| Ball material (13)       |                               |
|--------------------------|-------------------------------|
| 6                        | <b>S. St.</b>                 |
| 1                        | Bronze                        |
| 7                        | Monel                         |
| Stem material (14)       |                               |
| M                        | <b>High Strength S. Steel</b> |
| 6                        | S. St. A351                   |
| Z                        | Inconel                       |
| Seat material (15)       |                               |
| A                        | <b>TFM</b>                    |
| C                        | PCTFE                         |
| P                        | CF PTFE                       |
| Inner Seal Material (16) |                               |
| A                        | <b>TFM</b>                    |
| G                        | Expanded graphite             |
| Outer Seal Material (17) |                               |
| G                        | <b>Expanded graphite</b>      |
| A                        | TFM                           |

| End connections (19-22)  |                                                         |
|--------------------------|---------------------------------------------------------|
| Welding                  |                                                         |
| 150(2)*                  | <b>ASME B16.5 #150 RF</b>                               |
| 300(2)**                 | <b>ASME B16.5 #300 RF</b>                               |
| PN16(2)***               | <b>EN1092 PN16 RF</b>                                   |
| PN40(2)****              | <b>EN1092 PN40 RF</b>                                   |
| * C31, 73 series         |                                                         |
| ** C32, C74 series       |                                                         |
| *** C77 series           |                                                         |
| **** C78 series          |                                                         |
| Special Features (24-30) |                                                         |
| SPR                      | <b>Spring loaded seat, valve 21/2" Full port and up</b> |
| SPR                      | Spring loaded seat, up to 2 1/2" std. port              |
| 6.0                      | <b>Short bonnet</b>                                     |
| B                        | Body made from rolled bar                               |
| FF                       | Flat face                                               |
| F1                       | F1 - DIN 3202-1 RF face-to-face size                    |
| F4                       | F4 - DIN 3202-1 RF face-to-face size                    |
| F5                       | F5 - DIN 3202-1 RF face-to-face size                    |
| Vxx                      | V port (xx = angle)                                     |
| VBxx                     | Characterized control ball                              |