

61

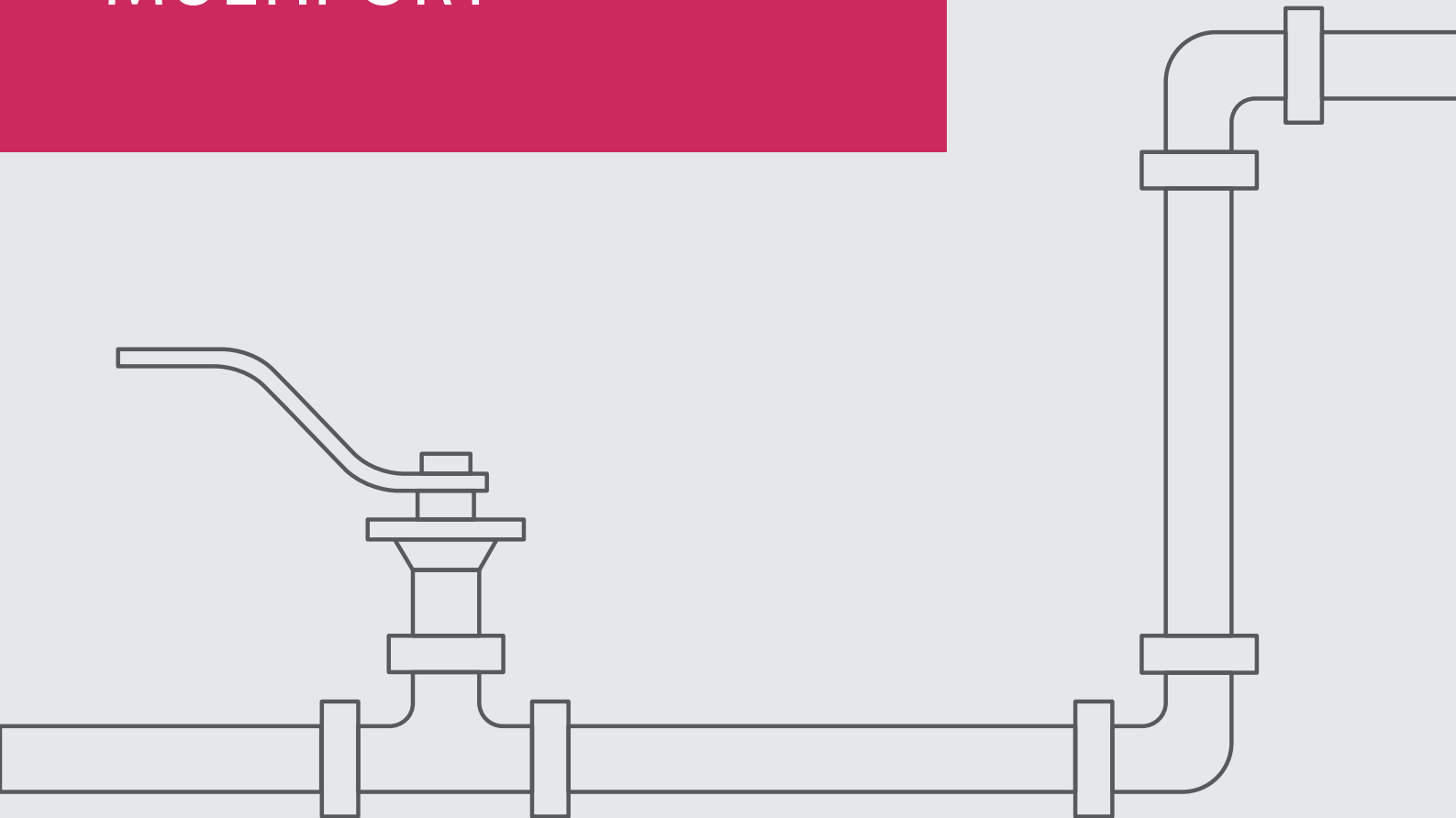
62



General Use Industrial

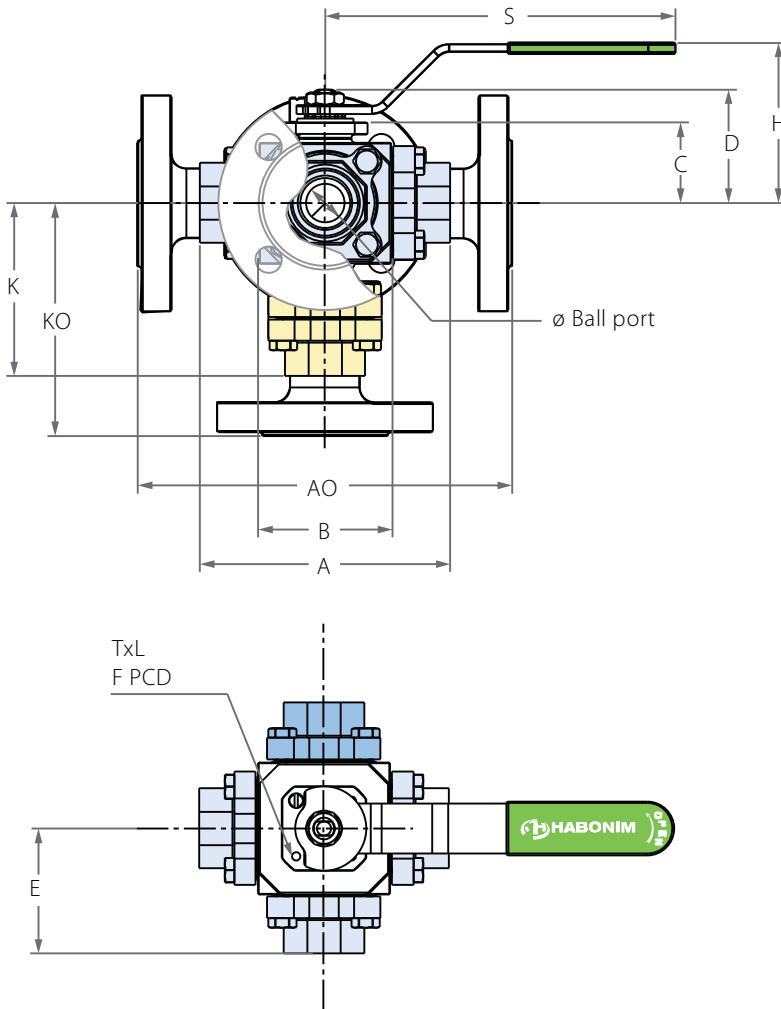
FLOATING BALL

MULTIPOINT

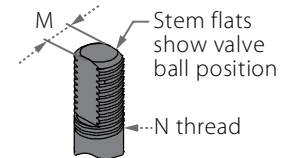
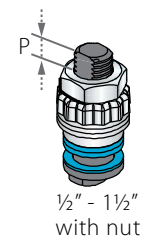


Multiport Floating Ball

Valve dimensions



Preparation for actuation



Valve Face To Face sizes are according to Habonim catalog data only, for Extended-weald/Flanged/Tri-clamp end see Face To Face sizes page.

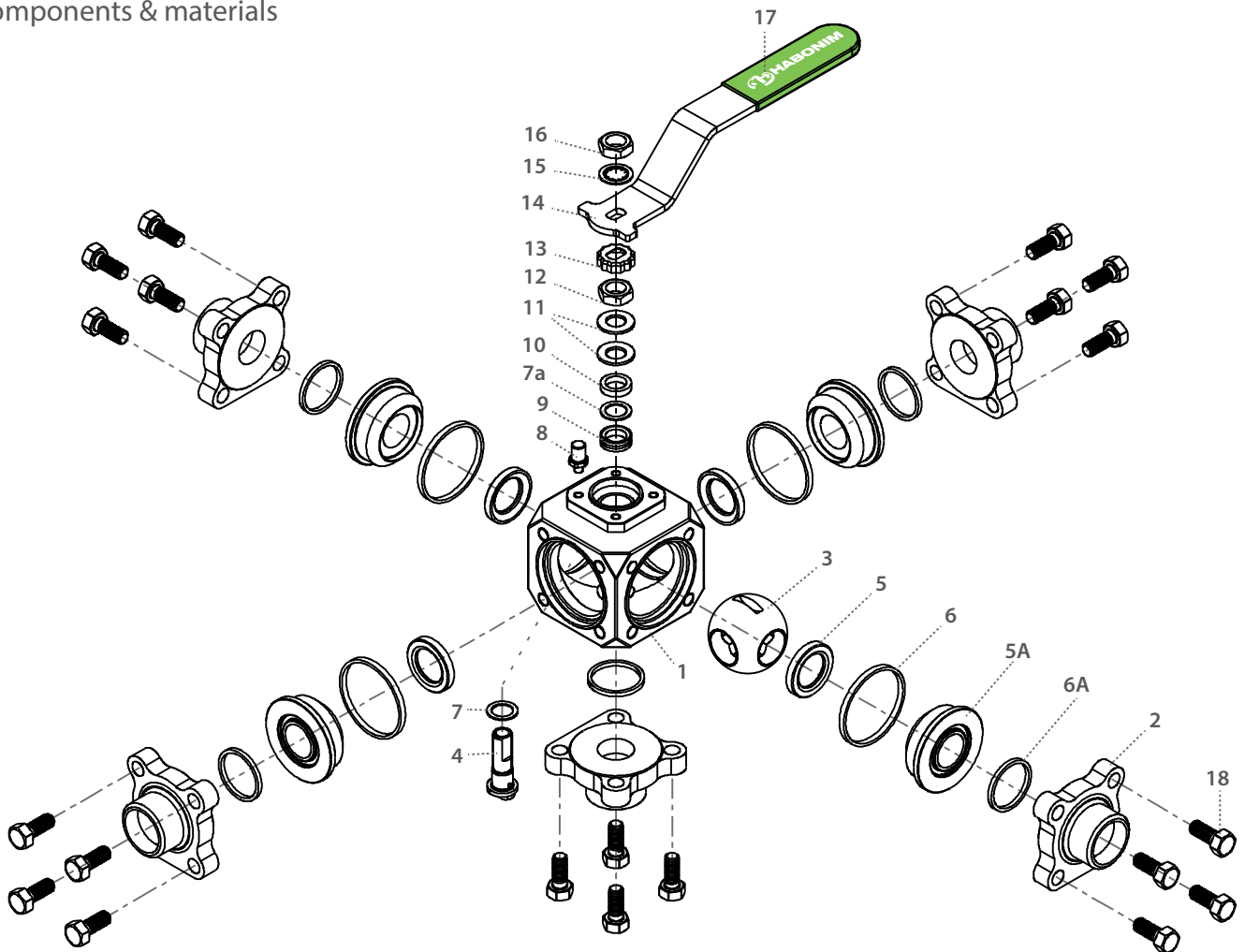
| Std. port | Unit | Ball port | A | AO | | | B | C | D | E (E0) | K | KO | | | H | M | N | P | TxL | F | S | Weight kg/lb |
|-----------|------|-----------|--------|----------|----------|-----------|-------|-------|-------|------------|--------|----------|----------|--------|--------|------|-------|------|-------|-------|--------|--------------|
| | | | | ANSI 150 | ANSI 300 | PN16 PN40 | | | | | | ANSI 150 | ANSI 300 | DIN | | | | | | | | |
| DN15 | mm | 14.30 | 108.00 | 154.50 | 190.00 | 187.50 | 62.00 | 37.50 | 50.00 | A/2 (A0/2) | 110.50 | 133.70 | 151.50 | 150.20 | 80.00 | 7.54 | 1/16" | 7.40 | M5X10 | (F04) | 187.00 | 2.75 |
| 1/2" | inch | 0.56 | 4.25 | 6.08 | 7.48 | 7.38 | 2.44 | 1.47 | 2.16 | | 4.35 | 5.26 | 5.96 | 5.91 | 3.14 | 0.30 | UNF | 0.29 | | | 7.36 | 6.06 |
| DN20 | mm | 14.30 | 108.00 | 154.50 | 190.00 | 187.50 | 62.00 | 37.50 | 50.00 | A/2 (A0/2) | 110.50 | 133.70 | 151.50 | 150.20 | 80.00 | 7.54 | 1/16" | 7.40 | M5X10 | (F04) | 187.00 | 2.75 |
| 3/4" | inch | 0.56 | 4.25 | 6.08 | 7.48 | 7.38 | 2.44 | 1.47 | 2.16 | | 4.35 | 5.26 | 5.96 | 5.91 | 3.14 | 0.30 | UNF | 0.29 | | | 7.36 | 6.06 |
| DN25 | mm | 20.70 | 135.00 | 167.00 | 205.00 | 200.00 | 71.60 | 43.00 | 60.50 | A/2 (A0/2) | 93.20 | 109.20 | 128.20 | 125.70 | 85.50 | 7.54 | 7/16" | 7.40 | M5X10 | (F04) | 187.00 | 4.00 |
| 1" | inch | 0.81 | 5.31 | 6.57 | 8.07 | 7.87 | 2.81 | 1.69 | 2.38 | | 3.66 | 4.29 | 5.04 | 4.94 | 3.36 | 0.30 | UNF | 0.29 | | | 7.36 | 8.82 |
| DN32 | mm | 25.50 | 144.00 | 174.50 | 205.50 | 207.50 | 76.00 | 48.00 | 65.50 | A/2 (A0/2) | 102.00 | 117.20 | 132.70 | 133.70 | 90.00 | 7.54 | 1/16" | 7.40 | M5X10 | (F04) | 187.00 | 5.80 |
| 1 1/4" | inch | 1.00 | 5.66 | 6.87 | 8.09 | 8.16 | 2.99 | 1.88 | 2.57 | | 4.01 | 4.61 | 5.22 | 5.26 | 3.54 | 0.30 | UNF | 0.29 | | | 7.36 | 12.78 |
| DN40 | mm | 31.65 | 158.00 | 208.00 | 233.50 | 243.00 | 91.00 | 49.50 | 79.00 | A/2 (A0/2) | 106.00 | 131.00 | 143.70 | 148.50 | 103.00 | 8.71 | 1/16" | 8.50 | M6X12 | (F05) | 237.00 | 7.50 |
| 1 1/2" | inch | 1.24 | 6.22 | 8.18 | 9.19 | 9.56 | 3.58 | 1.94 | 3.11 | | 4.17 | 5.15 | 5.65 | 5.84 | 4.05 | 0.34 | UNF | 0.33 | | | 9.33 | 16.53 |

| Valve Size | | Flow Coefficients | |
|------------|--------|-------------------|----|
| mm | inch | KV | CV |
| DN20 | 3/4" | 9 | 11 |
| DN25 | 1" | 27 | 31 |
| DN32 | 1 1/4" | 47 | 55 |
| DN40 | 1 1/2" | 67 | 78 |



Multiport Floating Ball

Components & materials



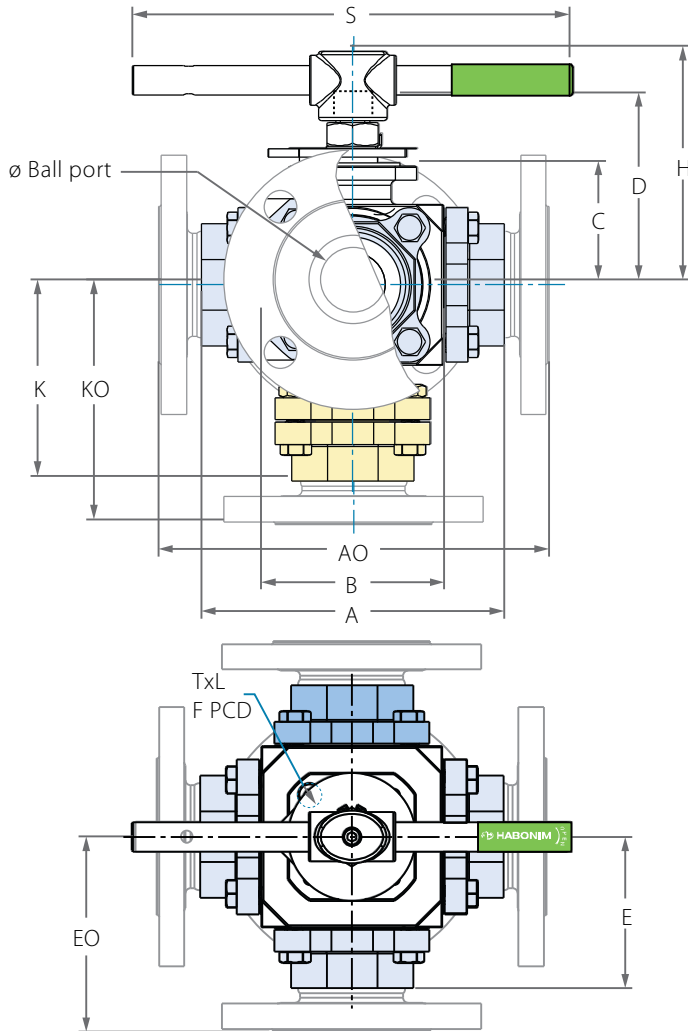
| Item | Description | Material specification | Qty. |
|------|--------------------|-------------------------------------------|------|
| 1 | Body | Acc. Ordering Code | 1 |
| 2 | Ends | Acc. Ordering Code | 4 |
| 3 | Ball | Acc. Ordering Code | 1 |
| 4 | Stem | Acc. Ordering Code | 1 |
| 5* | Seat | Acc. Ordering Code | 4 |
| 5A | Support seat | Acc. Ordering Code | 4 |
| 6 | Inner seal | PTFE, RPTFE, UHMWPE | 5 |
| 6A | Outer seal | Graphite, PTFE | 4 |
| 7* | Stem thrust seal | PEEK, CF PEEK, PCTFE (KEL-F) ¹ | 1 |
| 7a | Anti-abrasion ring | PEEK, CF PEEK, PCTFE (KEL-F) ¹ | 1 |
| 8 | Stop pin | S. Steel | 1 |

| Item | Description | Material specification | Qty. |
|------|-----------------|------------------------|------|
| 9* | Stem seal | CF PTFE,TFM | 1 |
| 10 | Follower | S. Steel | 1 |
| 11 | Disc spring | S. Steel | 2 |
| 12 | Stem nut | S. Steel | 1 |
| 13 | Locking clip | S. Steel | 1 |
| 14 | Handle | S. Steel | 1 |
| 15 | Serrated washer | S. Steel | 1 |
| 16 | Handle nut | S. Steel | 1 |
| 17 | Sleeve | PVC | 1 |
| 18 | Body bolt | S. Steel | 20 |
| 23 | Tag (not shown) | S. Steel | 1 |

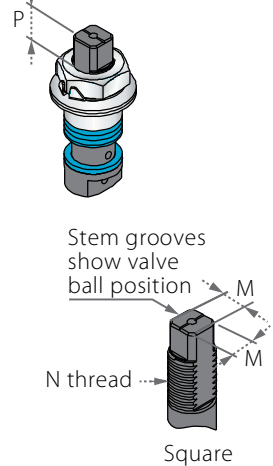
* Repair kit components

Multiport Floating Ball

Valve dimensions



Preparation for actuation



Valve Face To Face sizes are according to Habonim catalog data only, for Extended-weald/Flanged/Tri-clamp end see Face To Face sizes page.

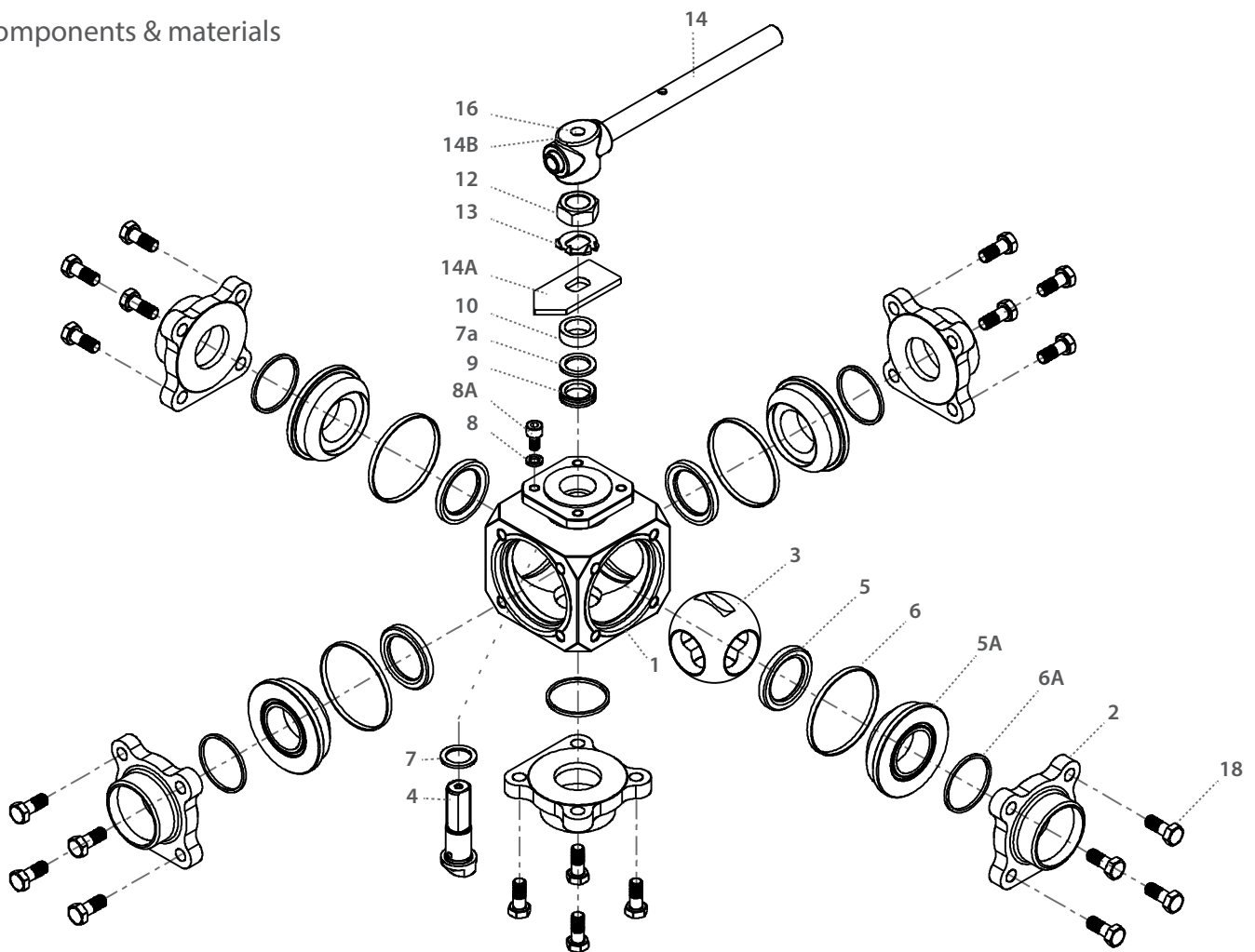
| Std. port | Unit | Ball port | A | A0 | | | B | C | D | E (E0) | K | K0 | | | H | M | M-DD | N | P | TxL | F | S | Weight kg/lb |
|-----------|------|-----------|--------|----------|----------|-----------|--------|--------|--------|------------|--------|----------|----------|-----------|--------|-------|-------|-----------------|-------|--------|-------|--------|--------------|
| | | | | ANSI 150 | ANSI 300 | PN16 PN40 | | | | | | ANSI 150 | ANSI 300 | PN16 PN40 | | | | | | | | | |
| DN50 | mm | 38.10 | 178.00 | 228.70 | 266.80 | 280.90 | 107.20 | 69.60 | 111.20 | A/2 (A0/2) | 115.00 | 140.50 | 159.50 | 166.30 | 139.40 | 13.90 | - | M20x2.5 | 14.60 | M8X12 | (F07) | 400.00 | 90 |
| 2" | inch | 1.50 | 7.00 | 9.00 | 10.50 | 11.05 | 4.22 | 2.74 | 4.37 | | 4.52 | 5.53 | 6.27 | 6.54 | 5.48 | 0.55 | - | | 0.57 | | | 15.75 | 104 |
| DN65 | mm | 50.80 | 210.40 | 242.90 | 293.70 | 342.40 | 125.00 | 78.50 | 120.10 | A/2 (A0/2) | 143.20 | 159.50 | 184.80 | 209.20 | 150.90 | 13.90 | - | M20x2.5 | 14.60 | M8X12 | (F07) | 400.00 | 183 |
| 2½" | inch | 2.00 | 8.28 | 9.56 | 11.56 | 13.48 | 4.92 | 3.09 | 4.72 | | 5.63 | 6.27 | 7.27 | 8.23 | 5.94 | 0.55 | - | | 0.57 | | | 15.75 | 212 |
| DN80 | mm | 60.00 | 250.00 | 283.90 | 363.20 | 390.60 | 164.00 | 102.00 | 149.00 | A/2 (A0/2) | 149.00 | 158.00 | 158.00 | 158.00 | 139.40 | 18.90 | 15.90 | 1"-14 UNS-2A | 16.70 | M10x20 | (F10) | 610.00 | 264 |
| 3" | inch | 2.36 | 9.84 | 11.17 | 14.29 | 15.37 | 6.45 | 4.01 | 5.86 | | 5.87 | 6.22 | 6.22 | 6.22 | 5.48 | 0.74 | 0.63 | | 0.66 | | | 24.00 | 306 |
| DN100 | mm | 76.00 | 309.80 | 324.80 | 401.00 | 446.20 | 205.00 | 116.70 | 168.00 | A/2 (A0/2) | 190.00 | 200.00 | 200.00 | 200.00 | 150.90 | 28.45 | 23.75 | 1"-14 UNS-2A | 26.20 | M10x20 | (F10) | 920.00 | 541 |
| 4" | inch | 2.99 | 12.19 | 12.19 | 15.78 | 17.56 | 8.07 | 4.59 | 6.61 | | 7.48 | 7.87 | 7.87 | 7.87 | 5.94 | 0.74 | 0.63 | | 0.66 | | | 36.20 | 628 |

| Valve Size | | Flow Coefficients | |
|------------|------|-------------------|-----|
| mm | inch | KV | CV |
| DN50 | 2" | 87 | 101 |
| DN65 | 2½" | 201 | 233 |
| DN80 | 3" | 267 | 310 |
| DN100 | 4" | 484 | 562 |



Multiport Floating Ball

Components & materials



| Item | Description | Material specification | Qty. |
|------|--------------------|------------------------------|------|
| 1 | Body | Acc. Ordering Code | 1 |
| 2 | Ends | Acc. Ordering Code | 4 |
| 3 | Ball | Acc. Ordering Code | 1 |
| 4 | Stem | Acc. Ordering Code | 1 |
| 5* | Seat | Acc. Ordering Code | 4 |
| 5A | Support seat | Acc. Ordering Code | 4 |
| 6 | Inner seal | PTFE, RPTFE, UHMWPE | 5 |
| 6A | Outer seal | Graphite, PTFE | 4 |
| 7* | Stem thrust seal | PEEK, CF PEEK, PCTFE (KEL-F) | 1 |
| 7a | Anti-abrasion ring | PEEK, CF PEEK, PCTFE (KEL-F) | 1 |
| 8 | Spring Washer | S. Steel | 1 |
| 8A | Stop Bolts | S. Steel | 1 |

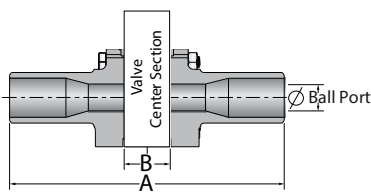
| Item | Description | Material specification | Qty. |
|------|-----------------|------------------------|------|
| 9* | Stem seal | CF PTFE,TFM | 1 |
| 10 | Follower | S. Steel | 1 |
| 12 | Stem nut | S. Steel | 1 |
| 13 | Tab Lock Washer | S. Steel | 1 |
| 14 | Wrench Handle | C.St. Zinc Plate | 1 |
| 14A | Stop Plate | S. Steel | 1 |
| 14B | Wrench Head | S. Steel | 1 |
| 16 | Wrench Bolt | S. Steel | 1 |
| 17 | Sleeve | PVC | 1 |
| 18 | Body bolt | S. Steel | 20 |
| 23 | Tag (not shown) | S. Steel | 1 |

* Repair kit components

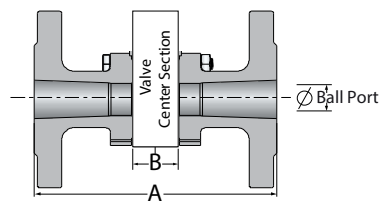
Face To Face Sizes

| Valve Size | Unit | B | | A-XBW | | A-ETO | A-Flanged | | A-TC |
|------------|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | Std. port | Full port | Std. port | Full port | Std. port | Std. port | Full port | Full port |
| DN10 | mm | 62.0 | 62.0 | 182.0 | 184.4 | 150.0 | | | |
| 3/8" | inch | 2.4 | 2.4 | 7.2 | 7.3 | 5.9 | | | |
| DN15 | mm | 62.0 | 62.0 | 182.0 | 184.4 | 178.4 | 181.4 | 189.4 | 130.2 |
| 1/2" | inch | 2.4 | 2.4 | 7.2 | 7.3 | 7.0 | 7.1 | 7.5 | 5.1 |
| DN20 | mm | 62.0 | 71.6 | 184.4 | 208.6 | 184.4 | 189.4 | 205.0 | 139.0 |
| 3/4" | inch | 2.4 | 2.8 | 7.3 | 8.2 | 7.3 | 7.5 | 8.1 | 5.5 |
| DN25 | mm | 71.6 | 76.0 | 208.6 | 214.0 | 204.0 | 205.0 | 212.8 | 154.2 |
| 1" | inch | 2.8 | 3.0 | 8.2 | 8.4 | 8.0 | 8.1 | 8.4 | 6.1 |
| DN32 | mm | 76.0 | 91.0 | 214.0 | 232.0 | 214.0 | 212.8 | 232.6 | |
| 1 1/4" | inch | 3.0 | 3.6 | 8.4 | 9.1 | 8.4 | 8.4 | 9.2 | |
| DN40 | mm | 91.0 | 107.2 | 232.0 | 251.2 | 226.6 | 232.6 | 267.0 | 182.4 |
| 1 1/2" | inch | 3.6 | 4.2 | 9.1 | 9.9 | 8.9 | 9.2 | 10.5 | 7.2 |
| DN50 | mm | 107.2 | 125.0 | 251.2 | 285.0 | 244.4 | 267.0 | 293.4 | 209.8 |
| 2" | inch | 4.2 | 4.9 | 9.9 | 11.2 | 9.6 | 10.5 | 11.6 | 8.3 |
| DN65 | mm | 125.0 | 164.0 | 285.0 | 364.0 | 275.0 | 293.4 | 362.6 | 265.4 |
| 2 1/2" | inch | 4.9 | 6.5 | 11.2 | 14.3 | 10.8 | 11.6 | 14.3 | 10.4 |
| DN80 | mm | 164.0 | 205.0 | 364.0 | 445.0 | 331.0 | 362.6 | 378.2 | 296.4 |
| 3" | inch | 6.5 | 8.1 | 14.3 | 17.5 | 13.0 | 14.3 | 14.9 | 11.7 |
| DN100 | mm | 205.0 | | 445.0 | 267.0 | 445.0 | 401.2 | 182.0 | 341.6 |
| 4" | inch | 8.1 | | 17.5 | 10.5 | 17.5 | 15.8 | 7.2 | 13.4 |
| DN200 | mm | | | 298.0 | 0.0 | 298.0 | 257.0 | 223.0 | 0.0 |
| 6" | inch | | | 11.7 | 0.0 | 11.7 | 10.1 | 8.8 | 0.0 |

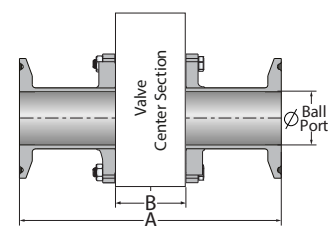
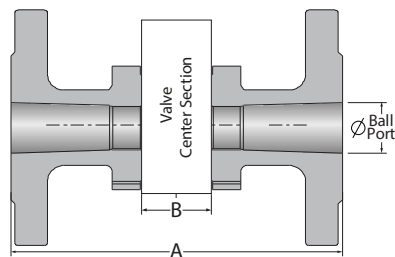
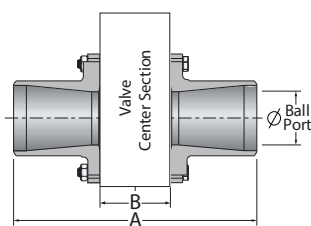
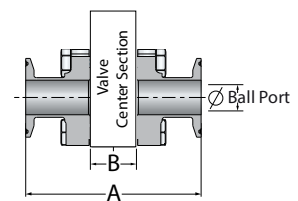
XBW / ETO



Flanged



TC





Multiport 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 |
| 2 | 0 | | | | | 6 | 1 | X | - | 6 | 6 | 6 | 6 | A | T | | / | B | W | | | # | 0 | 3 | 4 | | | | |
| Size | | Features | | | | Series | | Design | - | Body/end material | | Ball/Stem material | | Seat material | Inner Seal material | Outer Seal material | / | End connection | | | Flow pattern code | | | | Special features | | | | |

| Size (1-2) | | |
|------------|------|-----|
| Code | inch | mm |
| 02 | ¼" | 8 |
| 03 | ⅜" | 10 |
| 05 | ½" | 15 |
| 07 | ¾" | 20 |
| 10 | 1" | 25 |
| 12 | 1¼" | 32 |
| 15 | 1½" | 40 |
| 20 | 2" | 50 |
| 25 | 2½" | 65 |
| 30 | 3" | 80 |
| 40 | 4" | 100 |

| Features (3-6) | |
|----------------|-------------------------------|
| B * | Full port |
| F | Shell only - fire safe |
| O | Clean assembly for O2 service |

* up to 3"

| Series (7-8) | |
|--------------|---------------------------------------|
| 61 | Multiport with three horizontal ports |
| 62 | Multiport with four horizontal ports |

| Design (9) | |
|------------|--------------------|
| X | Hermetic stem seal |

| Body/Ends material (11-12) | |
|----------------------------|------------------------|
| 6 | S. SteelCF8M/CF3M |
| 1 | Bronze |
| 4 | C. steel A216 WCB/A105 |
| 9 | C. steel A352 LCB |
| 7 | Monel |
| A | Alloy-20 A351 CN7M |
| W | Alloy-C22 B574 |
| D | Duplex A479 |
| K | Super Duplex A479 |
| S | 254SMO A479 |

| Ball material (13) | |
|--------------------|-------------------|
| 6 | S. SteelCF8M/CF3M |
| W | Hasteloy-C22 |
| S | 254SMO |
| D | Duplex |
| 1 | Bronze |
| K | Super Duplex |
| 7 | Monel |
| A | Alloy-20 |

| Stem material (14) | |
|--------------------|------------------------|
| 6 | S. Steel316L |
| M | High Strength S. Steel |
| Z | Inconel 718 B637 |
| W | Alloy-C22 B574 |
| S | 254SMO A479 |
| A | Alloy-20 A351 CN7M |
| D | Duplex A479 |
| K | Super Duplex A479 |
| 7 | Monel |

| Seat material (15) | |
|--------------------|-------------|
| A | TFM |
| U | UHMWPE |
| P | CF PTFE |
| C | PCTFE |
| K | CF PEEK |
| L | Virgin Peek |

| Inner Seal Material (16) | |
|--------------------------|-------------------|
| T | PTFE |
| G | Expanded graphite |
| A | TFM |
| U | UHMWPE |

| End Connection (19-22) | |
|------------------------|----------------------------|
| Welded ends | |
| BW10 | Buttweld schd. 10 |
| BW | Buttweld schd. 40 |
| XBW10 | Extended buttweld schd. 10 |
| XBW | Extended buttweld schd. 40 |
| BW5 | Buttweld schd. 5 |
| BWD | Buttweld DIN 11850 |
| SW | Socket weld |
| SWO | Socket weld tube OD |
| BWO | Buttweld tube OD |
| ETO | Extended tube OD |
| XSW | Extended socket weld |

| Threaded | |
|----------|-------------------------------------------|
| NPT | ASME B1.20.1 - National Pipe Taper thread |
| MNPT | Male NPT |
| BSPT | EN 10226 - Pipe Taper thread |
| MBSPT | Male BSPT |
| BSPP | ISO228-1, DIN3852 - Pipe Parallel thread |
| DIN3852 | DIN3852 - Pipe Parallel thread |
| AS5202 | SAE internal straight thread |

| Flanged | |
|---------|--------------------|
| 150 | ASME B16.5 #150 RF |
| 300 | ASME B16.5 #300 RF |
| 600 | ASME B16.5 #600 RF |
| PN16 | EN1092 PN16 RF |
| PN40 | EN1092 PN40 RF |
| PN64 | EN1092 PN64 RF |
| PN100 | EN1092 PN100 RF |

| Clamp | |
|-------|------------------------------------------------------------------------------------------|
| LL | Compression fitting (Imperial) - No Nuts & Ferrules |
| LM | Compression fitting (metric) - No Nuts & Ferrules |
| LL-NF | Compression fitting (Imperial) - with Nuts & Ferrules |
| LM-NF | Compression fitting (metric) - with Nuts & Ferrules |
| TC | Tri-Clamp |
| GR | Grayloc® compatible hub (Grayloc® is a registered trademark of Grayloc Products, L.L.C.) |

| Flow pattern code (23 -26) | |
|----------------------------|-----------------------|
| #001- | Flow pattern |
| #085 | (see following pages) |

| Special Features (27-30) | |
|--------------------------|------------------------------------|
| B | Body made from rolled bar |
| EP | Electropolished |
| G... | Internal surface finish (G24, G32) |

| Valve Special Stem Seals | |
|--------------------------|----------------------------------------------------------------|
| HC | High Cycle service |
| AAX | FDA compliant stem seal. TFM thrust bearing and X shape gasket |
| PPX | CF PTFE thrust and X shape gasket |
| CAX | PCTFE thrust and TFM X shape gasket |
| CPX | PCTFE thrust and CF PTFE X shape gasket |

MULTIPORT FLOATING BALL

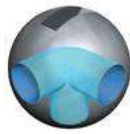
Ball Types



L - Horizontal



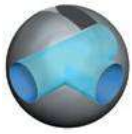
L - Vertical



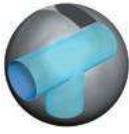
LL



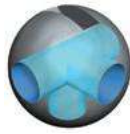
X (LL)



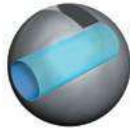
T - Horizontal



T - Vertical



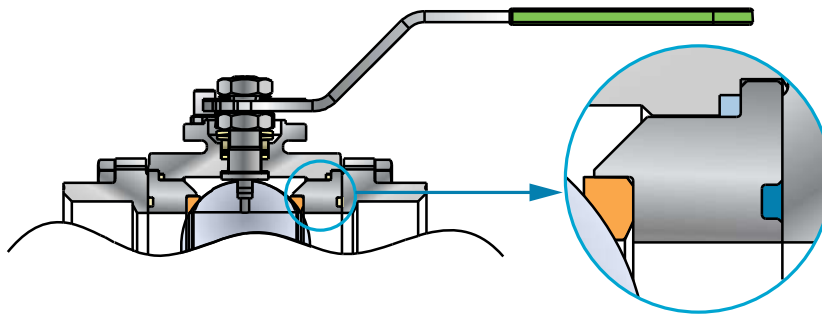
TT



I

Seats & body seals

The 61/62 series valves have 4 seats that provide enhanced sealing characteristics. The seats are inserted into a support ring which is sealed with 2 separate body seals - 1 seal between the support ring and the body and the other between the support ring and the end connector. Both body seals are encapsulated and thus provide tighter compression of the seal for higher



How to Use the Valve Selection

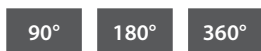
1. Select the valve type
3 Way Valve - Side Entry



2. Select the ball type
T - Horizontal



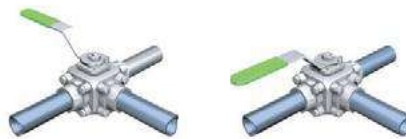
3. Select the rotation angle



4. Select the rotation direction (ccw/cw)



5. Select the starting position and flow pattern
Flow is indicated by a blue pipeline

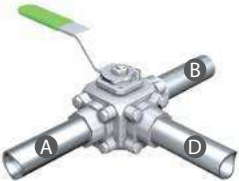



6. Use the flow pattern code number to order the appropriate valve

| 90° | CCW ⌚ | |
|-------|-------|-------|
| | # 001 | # 002 |
| Start | | |



3 Way Valve | Side Entry

| 90° | CCW ⦿ | | | | CW ⦿ | | | |
|-----------------|-------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|
| | # 001 | # 002 | # 003 | # 004 | # 005 | # 006 | # 007 | # 008 |
| Start | | | | | | | | |
| 2 nd | | | | | | | | |
| 180° | CCW ⦿ | | | | CW ⦿ | | | |
| | # 009 | # 010 | # 011 | # 012 | # 013 | # 014 | # 015 | # 016 |
| Start | | | | | | | | |
| 2 nd | | | | | | | | |
| 3 rd | | | | | | | | |
| 360° | CCW ⦿ | CW ⦿ |   <p>T - Horizontal</p> | | | | | |
| | # 017 | # 018 | | | | | | |
| Start | | | | | | | | |
| 2 nd | | | | | | | | |
| 3 rd | | | | | | | | |
| 4 th | | | | | | | | |

MULTIPORT FLOATING BALL

3 Way Valve | Side Entry

| 90° | CCW ⌚ | | | CW ⌚ | | |
|-----------------|-------|-------|-------|-------|-------|-------|
| | # 019 | # 020 | # 021 | # 022 | # 023 | # 024 |
| Start | | | | | | |
| 2 nd | | | | | | |

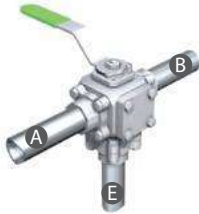

| 180° | CCW ⌚ | | CW ⌚ | |
|-----------------|-------|-------|-------|-------|
| | # 025 | # 026 | # 027 | # 028 |
| Start | | | | |
| 2 nd | | | | |
| 3 rd | | | | |

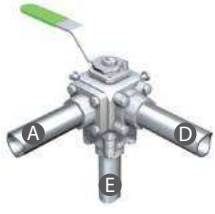
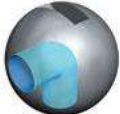


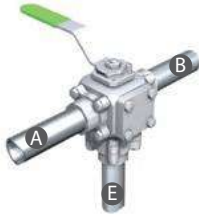
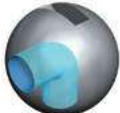


L - Horizontal

3 Way Valve | Bottom Entry

| 90° | CCW ⌚ |   <p>LL</p> |
|-----------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | # 029 | |
| Start | | |
| 2 nd | | |

| 90° | CCW ⌚ |   <p>L - Vertical</p> |
|-----------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | # 031 | |
| Start | | |
| 2 nd | | |

| 180° | CCW ⌚ |   <p>L - Vertical</p> | |
|-----------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| | # 030 | | |
| Start | | | |
| 2 nd | | | |
| 3 rd | | | |



4 Way Valve | Bottom Entry D61

| 90° | CCW ⌚ | | | | CW ⌚ | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | # 032 | # 033 | # 034 | # 035 | # 036 | # 037 | # 038 | # 039 |
| Start | | | | | | | | |
| 2 nd | | | | | | | | |
| 180° | CCW ⌚ | | | | CW ⌚ | | | |
| | # 040 | # 041 | # 042 | # 043 | # 044 | # 045 | # 046 | # 047 |
| Start | | | | | | | | |
| 2 nd | | | | | | | | |
| 3 rd | | | | | | | | |
| 360° | CCW ⌚ | CW ⌚ | | | | | | |
| | # 048 | # 049 | | | | | | |
| Start | | | | | | | | |
| 2 nd | | | | | | | | |
| 3 rd | | | | | | | | |
| 4 th | | | | | | | | |

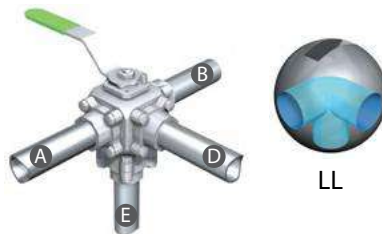
MULTIPORT FLOATING BALL

4 Way Valve | Bottom Entry D61

| | |
|-----------------|-----------------------------------------------------------------------------------|
| 90° | CW ◯ # 050 |
| Start |  |
| 2 nd |  |

| | | | | | | | | |
|-----------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 180° | CCW ◯ | | | | CW ◯ | | | |
| | # 051 | # 052 | # 053 | # 054 | # 055 | # 056 | # 057 | # 058 |
| Start |  |  |  |  |  |  |  |  |
| 2 nd |  |  |  |  |  |  |  |  |
| 3 rd |  |  |  |  |  |  |  |  |

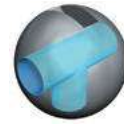
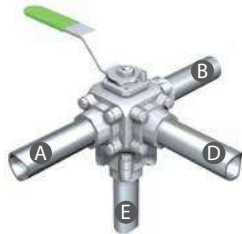
| | | |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 360° | CCW ◯ | CW ◯ |
| | # 059 | # 060 |
| Start |  |  |
| 2 nd |  |  |
| 3 rd |  |  |
| 4 nd |  |  |





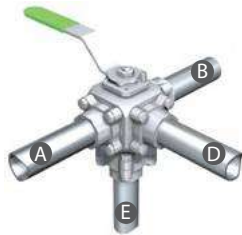
4 Way Valve | Bottom Entry D61

| 90° | CCW ⦿ # 061 |
|-----------------|----------------|
| Start | |
| 2 nd | |

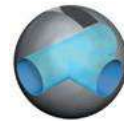
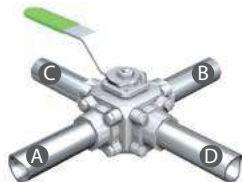


T - Vertical

| 360° | CCW ⦿ | CW ⦿ |
|-----------------|-------|-------|
| | # 062 | # 063 |
| Start | | |
| 2 nd | | |
| 3 rd | | |
| 4 th | | |



L - Vertical



T - Horizontal

4 Way Valve | Side Entry

| 90° | CCW ⦿ | CW ⦿ |
|-----------------|-------|-------|
| | # 064 | # 065 |
| Start | | |
| 2 nd | | |

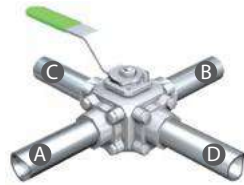
| 180° 2 positions | CW ⦿ |
|---------------------|-------|
| | # 066 |
| Start | |
| 2 nd | |

| 180° 3 positions | CCW ⦿ | CW ⦿ |
|---------------------|-------|-------|
| | # 067 | # 068 |
| | Start | |
| 2 nd | | |
| 3 rd | | |

MULTIPORT FLOATING BALL




4 Way Valve | Side Entry

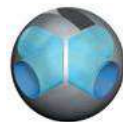
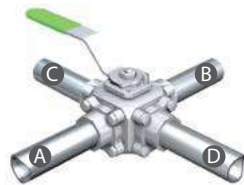
| | |
|-----------------|---------------------------------------------------------------------------------------|
| 180° | CCW  |
| | # 069 |
| Start |  |
| 2 nd |  |



L - Horizontal

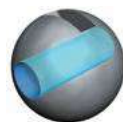
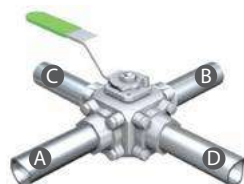
| | | |
|-----------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 360° | CCW  | CW  |
| | # 070 | # 071 |
| Start |  |  |
| 2 nd |  |  |
| 3 nd |  |  |
| 4 nd |  |  |

| | |
|-----------------|-----------------------------------------------------------------------------------------|
| 90° | CCW  |
| | # 072 |
| Start |  |
| 2 nd |  |



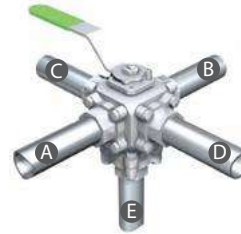
X (LL)

| | |
|-----------------|-----------------------------------------------------------------------------------------|
| 90° | CCW  |
| | # 073 |
| Start |  |
| 2 nd |  |



I

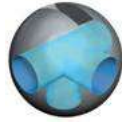
5 Way Valve - Bottom Entry D62



| 90° | CCW ◯ | CW ◯ |
|-----------------|-------|-------|
| | # 074 | # 075 |
| Start | | |
| 2 nd | | |

| 180° | CCW ◯ | CW ◯ |
|-----------------|-------|-------|
| | # 076 | # 077 |
| Start | | |
| 2 nd | | |
| 3 rd | | |

| 360° | CCW ◯ | CW ◯ |
|-----------------|-------|-------|
| | # 078 | # 079 |
| Start | | |
| 2 nd | | |
| 3 rd | | |
| 4 th | | |



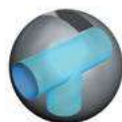
TT - Horizontal

| 360° | CCW ◯ | CW ◯ |
|-----------------|-------|-------|
| | # 081 | # 082 |
| Start | | |
| 2 nd | | |
| 3 rd | | |
| 4 th | | |



L - Vertical

| 90° | CCW ◯ |
|-----------------|-------|
| | # 080 |
| Start | |
| 2 nd | |



T - Vertical

| 180° 2 positions | CCW ◯ |
|---------------------|-------|
| | # 083 |
| Start | |
| 2 nd | |



LL

| 360° | CCW ◯ | CW ◯ |
|-----------------|-------|-------|
| | # 084 | # 085 |
| Start | | |
| 2 nd | | |
| 3 rd | | |
| 4 th | | |