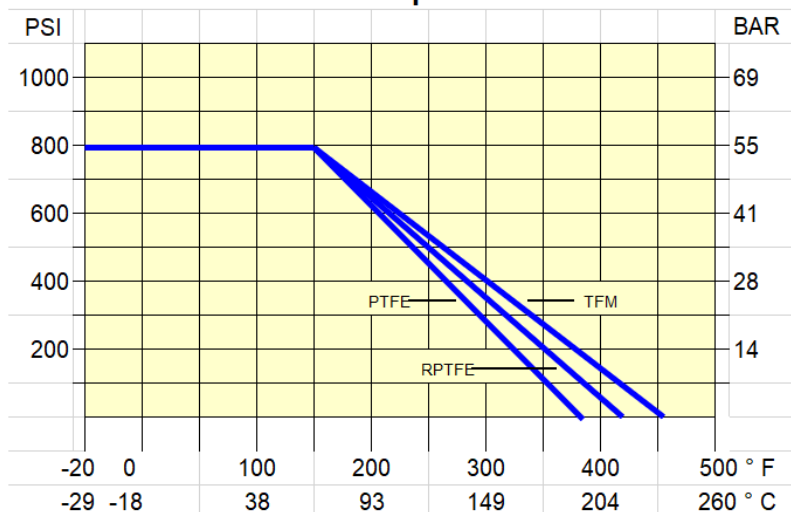


SPECIFICATION:

- ◆ Multi-Port, 3-Way and 4-Way
- ◆ Available in L-Port, T-Port, & X-Port
- ◆ Stainless Steel Body
- ◆ Full Port Design, 1000 PSI
- ◆ Four Piece Seat Design
- ◆ Socket Weld or Threaded Ends
- ◆ Blowout Proof Stem for Safety
- ◆ ISO 5211 Direct Mounting Pad
- ◆ Anti-Static Device Option
- ◆ Live Loaded Stem Design for High Cycle Life
- ◆ Silicone Free
- ◆ Material Traceability
- ◆ Size Range: ½" to 4"

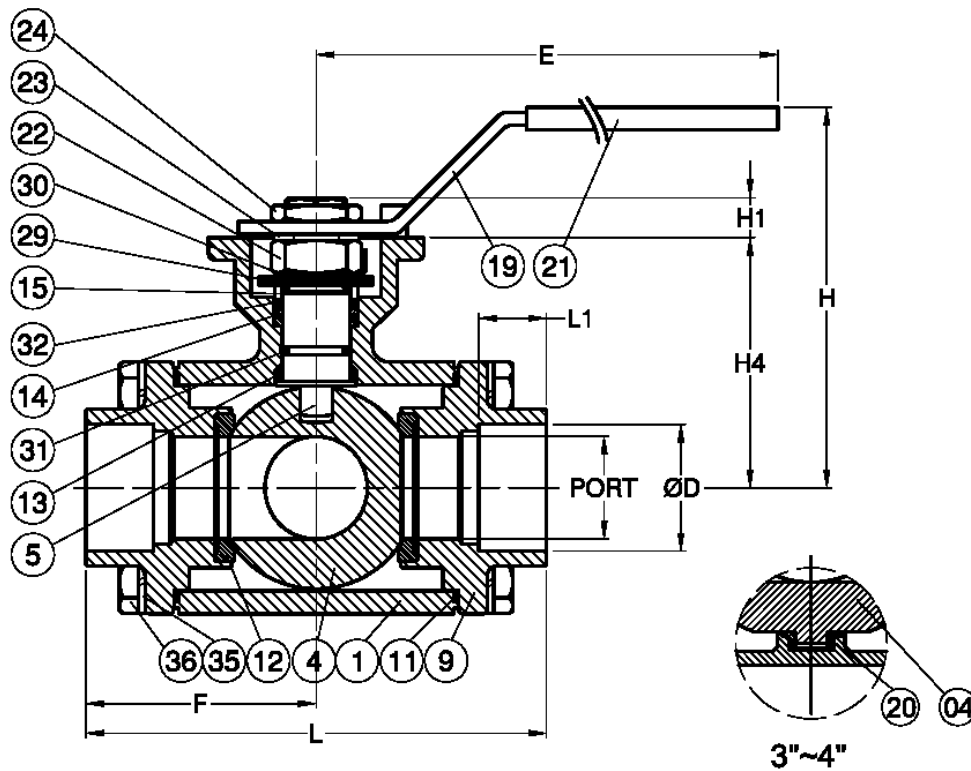


Pressure & Temperature Chart

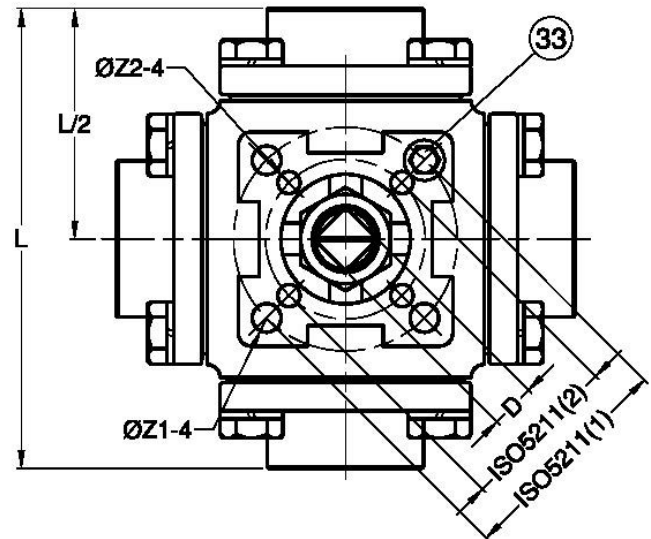
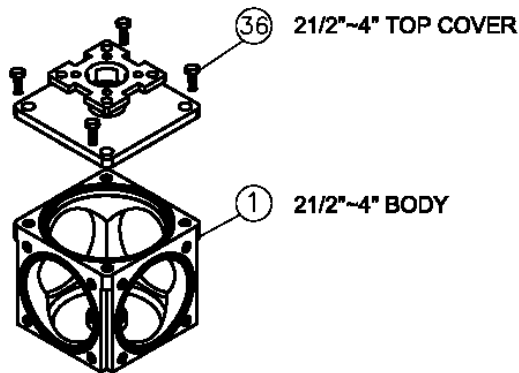
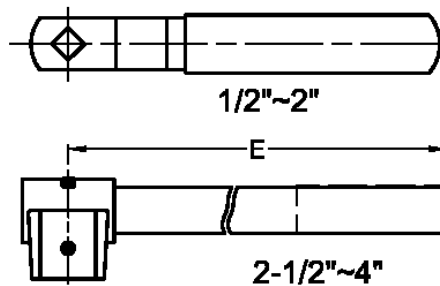


Valve Standards:

ASME – B16.34
 NACE – MR0175
 EN1024 – DIN 50-049-3.1B
 Approved for Europe
 Valve Testing – API 598, MSS SP 61


MATERIALS LIST:

| Item | Part | Material | Quantity |
|------|-------------------|------------------|----------|
| 1 | Body | ASTM A351 CF8M | 1 |
| 4 | Ball | ASTM A351 CF8M | 1 |
| 5 | Stem | 316 SS | 1 |
| 9 | End Cap | ASTM A351 CF8M | 4 |
| 11 | Body Seal | PTFE | 4 |
| 12 | Seat | RPTFE | 4 |
| 13 | Thrust Washer | RPTFE | 1 |
| 14 | Stem Packing | RPTFE | 1 set |
| 15 | Gland | 304 SS | 1 |
| 19 | Handle | 304 SS | 1 |
| 20 | Bushing | PTFE | 1 |
| 21 | Handle Grip | Vinyl | 1 |
| 22 | Stem Nut | 304 SS | 1 |
| 23 | Handle Washer | 304 SS | 1 |
| 24 | Handle Nut | 304 SS | 1 |
| 29 | Belleville Washer | 410 SS | 2 |
| 30 | Stop Washer | 304 SS | 1 |
| 31 | O-Ring | Viton | 1 |
| 32 | Packing Follower | RPTFE / 25% G.F. | 1 |
| 33 | Stop Pin | 304 SS | 1 set |
| 35 | Bolt | 304 SS | 16 |
| 36 | Bolt Washer | 304 SS | 16 |




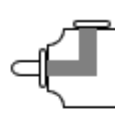



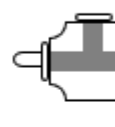









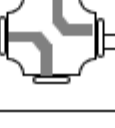

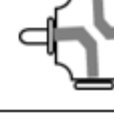

DIMENSIONS:

| SIZE | PORT | | Ø D * | | L | | L1 * | | E | | F | |
|--------|------|-----|-------|------|------|-------|------|----|------|-------|-----|-------|
| | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM |
| 1/2" | 0.6 | 16 | 0.9 | 21.8 | 3.8 | 96.0 | 0.4 | 10 | 7.3 | 186.5 | 1.9 | 48.0 |
| 3/4" | 0.8 | 20 | 1.1 | 27.4 | 4.2 | 107.0 | 0.5 | 13 | 8.6 | 218.0 | 2.1 | 53.5 |
| 1" | 1.0 | 25 | 1.3 | 34.1 | 5.0 | 126.0 | 0.5 | 13 | 8.6 | 218.0 | 2.5 | 63.0 |
| 1-1/4" | 1.3 | 32 | 1.7 | 42.7 | 5.2 | 133.0 | 0.5 | 13 | 9.3 | 235.0 | 2.6 | 66.5 |
| 1-1/2" | 1.5 | 38 | 1.9 | 49.0 | 5.9 | 151.0 | 0.5 | 13 | 9.3 | 235.0 | 3.0 | 75.5 |
| 2" | 2.0 | 50 | 2.4 | 61.0 | 6.5 | 166.0 | 0.6 | 16 | 9.9 | 252.0 | 3.3 | 83.0 |
| 2-1/2" | 2.6 | 65 | 3.0 | 77.0 | 6.9 | 175.0 | 0.6 | 16 | 11.9 | 302.0 | 3.4 | 87.5 |
| 3" | 3.0 | 76 | 3.6 | 90.2 | 8.3 | 210.0 | 0.6 | 16 | 11.9 | 302.0 | 4.1 | 103.6 |
| 4" | 3.9 | 100 | 3.0 | 77.0 | 11.2 | 285.6 | 0.9 | 22 | 23.6 | 600.0 | 5.6 | 142.8 |

| SIZE | H | | H1 | | H4 | | D | | Z1 | | Z2 | | ISO 5211 |
|--------|-----|-------|-----|------|-----|-------|-----|------|-----|------|-----|------|----------|
| | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | |
| 1/2" | 3.5 | 89.0 | 0.4 | 9.0 | 1.9 | 47.8 | 0.4 | 9.0 | 0.2 | 6.0 | | | F04 |
| 3/4" | 3.9 | 98.0 | 0.4 | 11.0 | 2.3 | 58.2 | 0.4 | 11.0 | 0.3 | 7.0 | | | F05 |
| 1" | 4.0 | 102.0 | 0.5 | 11.5 | 2.5 | 64.0 | 0.4 | 11.0 | 0.3 | 7.0 | | | F05 |
| 1-1/4" | 4.7 | 118.5 | 0.6 | 15.2 | 3.1 | 79.0 | 0.6 | 14.0 | 0.4 | 9.0 | 0.3 | 7.0 | F05-F07 |
| 1-1/2" | 5.0 | 127.0 | 0.6 | 14.3 | 3.5 | 88.5 | 0.6 | 14.0 | 0.4 | 9.0 | 0.3 | 7.0 | F05-F07 |
| 2" | 5.5 | 139.0 | 0.7 | 17.8 | 4.2 | 105.8 | 0.7 | 17.0 | 0.4 | 11.0 | 0.4 | 9.0 | F07-F10 |
| 2-1/2" | 6.5 | 165.7 | 0.7 | 17.5 | 4.6 | 117.3 | 0.7 | 17.0 | 0.4 | 11.0 | 0.4 | 9.0 | F07-F10 |
| 3" | 6.7 | 170.0 | 0.7 | 17.5 | 5.0 | 128.0 | 0.7 | 17.0 | 0.4 | 11.0 | 0.4 | 9.0 | F07-F10 |
| 4" | 6.7 | 170.0 | 1.2 | 30.0 | 8.1 | 205.0 | 1.1 | 27.0 | 0.0 | | 0.6 | 14.0 | F12 |

| Break Away Torques | | | Estimated Cv Values | | | Valve Weights | | | | |
|--------------------|--------|----------|---------------------|--------|--------|---------------|------------|------------|------------|------------|
| NM | Size | (in/lbs) | Size | L PORT | T PORT | Size | 3-Way (KG) | 3-Way (LB) | 4-Way (KG) | 4-Way (LB) |
| 9.8 | 1/2" | 87 | 1/2" | 8 | 11 | 1/2" | 1.8 | 3.9 | 2.0 | 4.4 |
| 17.6 | 3/4" | 156 | 3/4" | 22 | 31 | 3/4" | 2.6 | 5.6 | 2.9 | 6.4 |
| 29.6 | 1" | 262 | 1" | 39 | 55 | 1" | 4.0 | 8.8 | 4.5 | 9.9 |
| 55.8 | 1-1/4" | 494 | 1-1/4" | 55 | 78 | 1-1/4" | 5.4 | 11.9 | 6.0 | 13.3 |
| 78.4 | 1-1/2" | 694 | 1-1/2" | 71 | 101 | 1-1/2" | 8.4 | 18.4 | 9.3 | 20.6 |
| 161 | 2" | 1425 | 2" | 163 | 233 | 2" | 10.6 | 23.3 | 11.8 | 25.9 |
| 225 | 2-1/2" | 1991 | 2-1/2" | 217 | 310 | 2-1/2" | 22.6 | 49.8 | 24.4 | 53.8 |
| 245 | 3" | 2168 | 3" | 393 | 562 | 3" | 32.0 | 70.5 | 35.3 | 77.8 |
| 300 | 4" | 2655 | 4" | 630 | 840 | 4" | 41.1 | 90.6 | 44.8 | 98.8 |

FLOW PATTERNS

| POSITION | 1 | 2 | 3 | 4 |
|--------------|---|---|---|---|
| L PORT 3-WAY |  |  |  |  |
| T PORT 3-WAY |  |  |  |  |
| L PORT 4-WAY |  |  |  |  |
| T PORT 4-WAY |  |  |  |  |
| X PORT 4-WAY |  |  |  |  |

Howell MULTI-PORT Socket Weld & Threaded Ball Valve
HS2H Series

| 1 | SERIES |
|------|------------------|
| HS2H | Howell Multiport |

| 2 | - PORT STYLE |
|----|--------------|
| 3L | 3-Way L-Port |
| 3T | 3-Way T-Port |
| 4L | 4-Way L-Port |
| 4T | 4-Way T-Port |
| 4X | 4-Way X-Port |

| 3 | - BODY |
|----|-----------------|
| SS | Stainless Steel |

| 4 | - ENDS |
|----|-------------|
| IP | Threaded |
| SW | Socket Weld |

| 5 | - SEAT |
|---|---------------------|
| R | RPTFE * |
| M | TFM (Modified TFE) |
| S | 50/50 Stainless/TFE |
| T | PTFE |

* RPTFE Seats are Standard

| 6 | - SIZE |
|-----|--------|
| 12 | 1/2" |
| 34 | 3/4" |
| 1 | 1" |
| 114 | 1-1/4" |
| 112 | 1-1/2" |
| 2 | 2" |
| 212 | 2-1/2" |
| 3 | 3" |
| 4 | 4" |

| 6 | - ACTUATOR |
|----|---------------------------------|
| D3 | HDA-65 Pneumatic Double Acting |
| D4 | HDA-80 Pneumatic Double Acting |
| D5 | HDA-100 Pneumatic Double Acting |
| D6 | HDA-125 Pneumatic Double Acting |
| D7 | HDA-140 Pneumatic Double Acting |
| D8 | HDA-160 Pneumatic Double Acting |
| D9 | HDA-210 Pneumatic Double Acting |
| S3 | HSR-65 Pneumatic Spring Return |
| S4 | HSR-80 Pneumatic Spring Return |
| S5 | HSR-100 Pneumatic Spring Return |
| S6 | HSR-125 Pneumatic Spring Return |
| S7 | HSR-140 Pneumatic Spring Return |
| S8 | HSR-160 Pneumatic Spring Return |
| S9 | HSR-210 Pneumatic Spring Return |

Note, add "L" to prefix for low temperature actuator (-40°C).

Example:

D3L HDA-65 LT Pneumatic Double Acting

| 7 | - ACCESSORIES / OPTIONS |
|-----|---|
| 4L | Nema 4 Limit Switch |
| 7L | Nema 7 Limit Switch |
| 4S1 | Nema 4 Namur Solenoid Valve 120vac |
| 4S2 | Nema 4 Namur Solenoid Valve 24vdc |
| 7S1 | Nema 7 Namur Solenoid Valve 120vac |
| 7S2 | Nema 7 Namur Solenoid Valve 24vdc |
| 4S0 | Nema 4 Namur Solenoid Valve special voltage |
| 7S0 | Nema 7 Namur Solenoid Valve special voltage |

Contact Howell for full actuator and accessory specifications

Sample Part# and Description

HS2H-3L-SS-SW-R-112

HS2H SS SW 3-WAY RPTFE L-PORT FP BALL 1-1/2"

HS2H-3L-SS-SW-R-112-S4

HS2H SS SW 3-WAY RPTFE L-PORT FP BALL 1-1/2" CW HSR80 ACTUATOR

Howell reserves the right to alter design specifications without notice.