



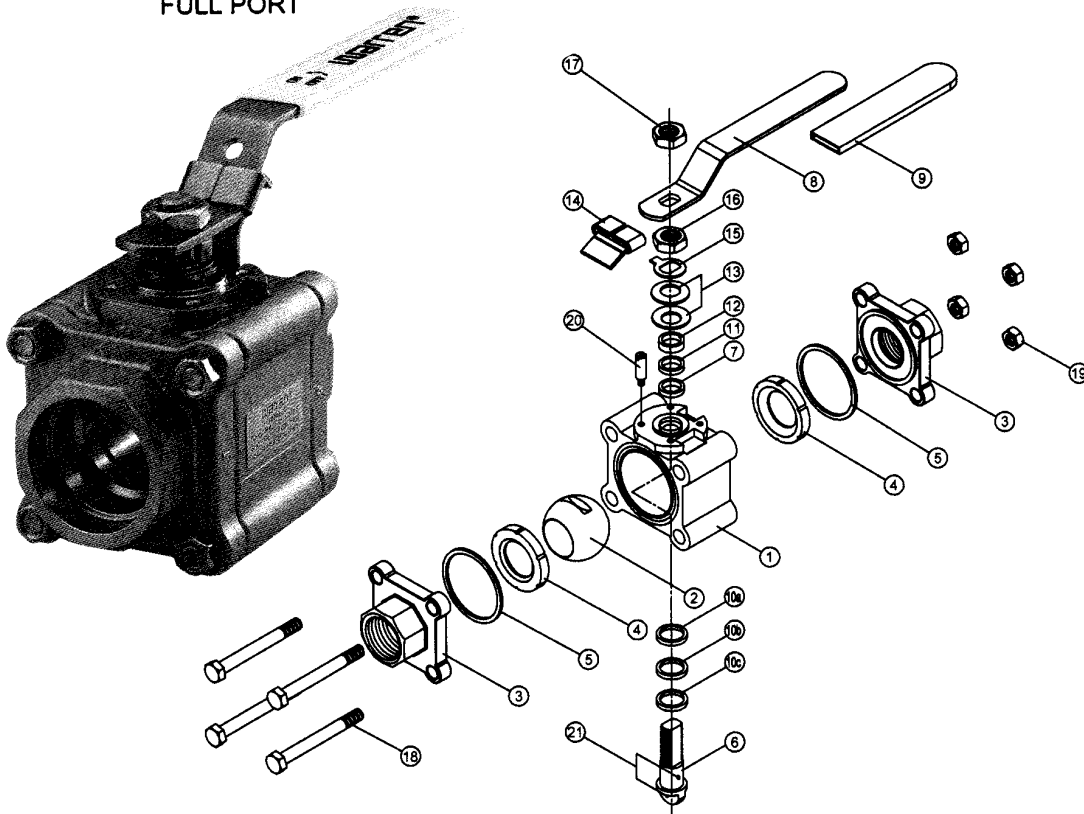
VALVES

THREE PIECE BALL VALVE

1/4" - 1" 2000 WOG / 1-1/4" - 2" 1500 WOG

FIRE SAFE TO API 607 4TH EDITION
 ISO 5211 MOUNTING PAD
 ENCLOSED BODY BOLT DESIGN
 FULL PORT

THREADED AND SOCKET WELD ENDS
 SS LOCKING HANDLE
 LIVE LOADED "BELLEVILLE" PACKING DESIGN

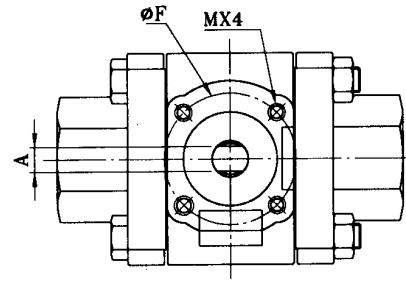
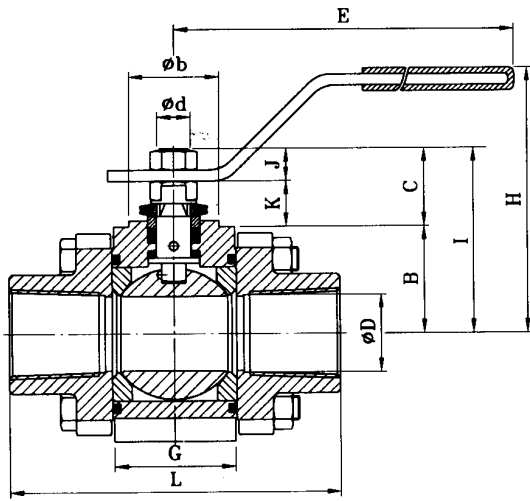


DESIGN STANDARDS

| Item | Standard |
|----------------------|-----------------------|
| Shell Wall Thickness | ANSI B16.34 Class 600 |
| Pressure Temp Rating | ANSI B16.34 |
| Pressure Test | API 598 |
| Pipe Threads | ANSI B1.20.1 |
| Socket Depth | ANSI B16.11 |
| Mounting Pad | ISO 5211 |
| Fire Safe | API 607 4th Edition |

| No. | Part Name | Stainless | Carbon |
|------|------------------------------|--------------------|-------------------|
| 1. | Body | ASTM A351 GR. CF8M | ASTM A216 Gr. WCB |
| 2. | Ball | ASTM A276 GR. 316 | ASTM A276 Gr. 316 |
| 3. | End Cap | ASTM A351 Gr. CF3M | ASTM A216 Gr. WCB |
| 4. | Seat | RTFE 15% Glass | RTFE 15% Glass |
| 5. | Body Seal | Graphite | Graphite |
| 6. | Stem | ASTM A276 GR. 316 | ASTM A276 GR. 316 |
| 7. | Stem Packing | Graphite | Graphite |
| 8. | Handle | ASTM A240 Gr. 304 | ASTM A240 Gr. 304 |
| 9. | Handle Cover | Plastic | Plastic |
| 10a. | Thrust Washer | RTFE 15% Glass | RTFE 15% Glass |
| 10b. | Thrust Washer | Graphite | Graphite |
| 10c. | Thrust Washer | RTFE 15% Glass | RTFE 15% Glass |
| 11. | Gland Bush | RTFE 25% Glass | RTFE 25% Glass |
| 12. | Follower | 304SS | 304SS |
| 13. | Belleville Washer | ASTM A240 Gr. 301 | ASTM A240 Gr. 301 |
| 14. | Locking Pad | ASTM A240 Gr. 304 | ASTM A240 Gr. 304 |
| 15. | Tab Washer | ASTM A240 Gr. 304 | ASTM A240 Gr. 304 |
| 16. | Stem Nut | ASTM A276 Gr. 304 | ASTM A276 Gr. 304 |
| 17. | Handle Nut | ASTM A276 Gr. 304 | ASTM A276 Gr. 304 |
| 18. | Bolt | ASTM A193 Gr. B8 | ASTM A193 Gr. B7M |
| 19. | Bolt Nut | ASTM A194 Gr. 8 | ASTM A194 Gr. 2HM |
| 20. | Stop Pin | ASTM A276 Gr. 304 | ASTM A276 Gr. 304 |
| 21. | Anti-Static Device 1/2" - 2" | ASTM A276 Gr. 304 | ASTM A276 Gr. 304 |

*Valve must contain graphite packing and gasket to be Fire Safe. Any change in seal components can affect the fire-safe rating of the valve.

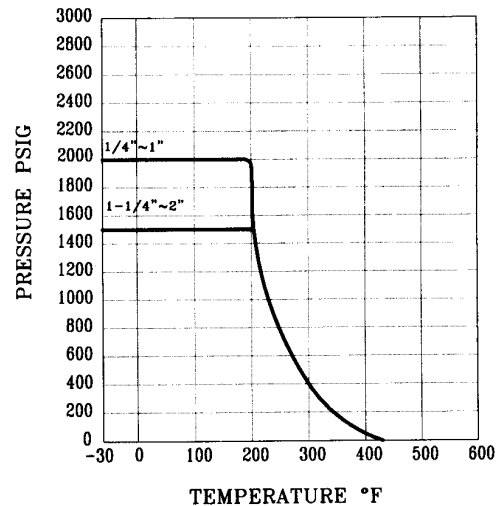


DIMENSIONAL DATA

| Size | A | B* | C* | D | E | F | G | H | I | J | K | L | M | b | d | Weight Lbs. | Cv Values |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|----|------|------|-------------|-----------|
| 1/4" | 0.26 | 1.17 | 0.29 | 0.39 | 5.28 | 1.42 | 0.81 | 2.52 | 1.46 | 0.24 | 0.05 | 2.55 | M5 | 0.98 | 0.37 | 1.61 | 8 |
| 3/8" | 0.26 | 1.17 | 0.29 | 0.39 | 5.28 | 1.42 | 0.81 | 2.52 | 1.46 | 0.24 | 0.05 | 2.55 | M5 | 0.98 | 0.37 | 1.61 | 8 |
| 1/2" | 0.26 | 1.14 | 0.63 | 0.59 | 5.28 | 1.42 | 0.98 | 2.83 | 1.78 | 0.29 | 0.35 | 2.85 | M5 | 0.98 | 0.37 | 1.83 | 12 |
| 3/4" | 0.26 | 1.30 | 0.72 | 0.77 | 5.28 | 1.42 | 1.24 | 3.01 | 2.02 | 0.36 | 0.37 | 3.36 | M5 | 0.98 | 0.37 | 4.03 | 32 |
| 1" | 0.31 | 1.42 | 0.99 | 0.98 | 6.69 | 1.65 | 1.63 | 3.27 | 2.41 | 0.46 | 0.54 | 4.15 | M5 | 1.18 | 0.44 | 4.58 | 56 |
| 1-1/4" | 0.31 | 1.57 | 0.95 | 1.26 | 6.69 | 1.65 | 1.91 | 3.46 | 2.53 | 0.38 | 0.57 | 4.37 | M5 | 1.18 | 0.44 | 6.12 | 82 |
| 1-1/2" | 0.38 | 1.86 | 1.25 | 1.50 | 8.15 | 1.97 | 2.22 | 4.10 | 3.11 | 0.54 | 0.71 | 5.01 | M6 | 1.38 | 0.56 | 8.78 | 120 |
| 2" | 0.47 | 2.81 | 1.11 | 1.97 | 8.46 | 2.76 | 2.81 | 5.24 | 3.91 | 0.57 | 0.54 | 5.71 | M6 | 2.17 | 0.75 | 14.67 | 240 |

*Note: B and C plus or minus .02

**PRESSURE TEMPERATURE DATA
SEAT MATERIAL - RTFE**



AUTOMATION DATA

| SIZE | STEM SIZE | STEM THREAD COUNT | MOUNT PAD THREADS | ISO 5211 | TORQUE * IN/LBS |
|--------|-----------|-------------------|-------------------|----------|-----------------|
| 1/4" | 3/8" | 24UNC | M5 X 0.8 | F03 | 30 |
| 3/8" | 3/8" | 24UNC | M5 X 0.8 | F03 | 30 |
| 1/2" | 3/8" | 24UNC | M5 X 0.8 | F03 | 40 |
| 3/4" | 3/8" | 24UNC | M5 X 0.8 | F03 | 70 |
| 1" | 7/16" | 20UNC | M5 X 0.8 | F04 | 120 |
| 1-1/4" | 7/16" | 20UNC | M5 X 0.8 | F04 | 200 |
| 1-1/2" | 9/16" | 18UNC | M6 X 1.0 | F05 | 300 |
| 2" | 9/16" | 18UNC | M6 X 1.0 | F07 | 720 |

*Estimated torque factors are at full differential pressure and clean service. Certain applications can alter the valve torque significantly. Please take into consideration your service conditions, differential pressure, frequency of operation, temperature, etc. when sizing actuators.

FIGURE NUMBER SYSTEM

| A DESIGN TYPE | B BODY MATERIAL | C BALL & STEM MATERIAL | D PORT TYPE | E SEATS | F BODY GASKET & STEM PACKING |
|------------------|--|---|-----------------------------------|---|--|
| 3-THREE PIECE | 5 - CARBON STEEL, WCB 4 - 304SS, CF8 6 - 316SS, CF8M 2 - ALLOY 20, CN7M 9 - C-276 (CW12MW) | 4 - 304 SS 6 - 316 SS 2 - ALLOY 20 9 - C-276 | R - REDUCED PORT F - FULL PORT | T - TFE R - RTFE P - PEEK U - UHMWPE D - DELRIN | T - TFE R - RTFE G - GRAPHITE V - VITON |

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