

# SPECIFICATIONS

## FIGURE 310AM STAINLESS STEEL BALL VALVES



### 3-PC FULL PORT 1000 CWP W/ ISO MOUNTING PAD

#### FEATURES

- 1000 PSI CWP non-shock
- 150 PSI WSP
- End connections
  - Threaded
  - Socket weld
- Full port
- Blowout-proof stem
- Live-loaded packing
- Anti-static design
- Investment cast body
- RTFE seats
- 4" with handle standard (lock-out style)
- Direct mounting pad
- Vacuum rated to 26.967"Hg (75 Torr)\*
- Vented ball
- Manufactured silicone-free
- Optional locking handle kit (1/4"–4")



#### PRODUCT SPECIFICATIONS

##### Standards

- Design: MSS SP-110
- End connections
  - NPT - ASME B1.20.1
  - SW - ASME B16.11
- Mounting pad: ISO 5211
- Seat/Shell test: MSS SP-110
- Corrosion resistance: NACE MR0103 and MR0175
- Fugitive emissions: ISO 15848-1 and TA-Luft

\* Vacuum measurements are often made in inches of mercury below atmospheric pressure. The values calculated here assume standard atmospheric pressure of 29.92 inches of mercury.

#### FIGURE NUMBER MATRIX

| FNW 310AM            |                 |           |
|----------------------|-----------------|-----------|
| END CONFIGURATION    | SIZE CODE (IN.) |           |
| Threaded NPT = Blank | 1/4 = B         | 1-1/2 = J |
| Socket Weld = SW     | 3/8 = C         | 2 = K     |
|                      | 1/2 = D         | 2-1/2 = L |
|                      | 3/4 = F         | 3 = M     |
|                      | 1 = G           | 4 = P     |
|                      | 1-1/4 = H       |           |

#### ACCESSORIES/OPTIONS



Replacement Locking Handle Kits (1/4"–4")



4" Includes Locking Handle

#### CV & WEIGHTS

| Size (in.) | CV   | Wt (lbs) |
|------------|------|----------|
| 1/4        | 16   | 1.01     |
| 3/8        | 23   | 1.03     |
| 1/2        | 30   | 1.05     |
| 3/4        | 55   | 1.73     |
| 1          | 96   | 2.33     |
| 1-1/4      | 170  | 4.30     |
| 1-1/2      | 270  | 5.21     |
| 2          | 470  | 9.09     |
| 2-1/2      | 780  | 17.31    |
| 3          | 1150 | 24.36    |
| 4          | 2100 | 51.00    |

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**FIGURE 310AM**  
STAINLESS STEEL BALL VALVES



3-PC FULL PORT 1000 CWP W/ ISO MOUNTING PAD

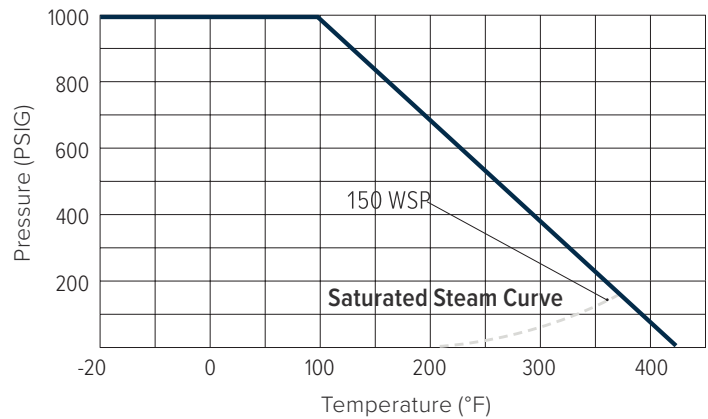
TORQUE (IN.-LBS)

| Size /ΔP | 150 PSIG | 300 PSIG | 1000 PSIG |
|----------|----------|----------|-----------|
|          | 10 Bar   | 20 Bar   | 63 Bar    |
| 1/4, 3/8 | 57       | 57       | 57        |
| 1/2      | 57       | 57       | 57        |
| 3/4      | 69       | 69       | 69        |
| 1        | 114      | 126      | 126       |
| 1-1/4    | 150      | 173      | 218       |
| 1-1/2    | 218      | 254      | 299       |
| 2        | 334      | 368      | 437       |
| 2-1/2    | 517      | 564      | 679       |
| 3        | 828      | 932      | 1162      |
| 4        | 1265     | 1404     | 1703      |

Note: 30% safety factor is recommended when sizing actuator.

KIT CODES

| FNW 310AM            |                 |              |
|----------------------|-----------------|--------------|
| KIT TYPE             | SIZE CODE (IN.) |              |
| Locking Handle = LHK | 1/4-3/4 = BF    | 2-1/2-3 = LM |
|                      | 1-1-1/4 = GH    | 4 = P        |
|                      | 1-1/2-2 = JK    |              |



REFERENCE CHART

| Size (in.) | Dimensions (in.) |      |      |      |      |      |      |      |      |      |          |      |      |         |      |      |      |
|------------|------------------|------|------|------|------|------|------|------|------|------|----------|------|------|---------|------|------|------|
|            | ØD               | L    | Lm   | H    | P    | A    | ØE1  | ØE2  | U1   | U2   | K (UNF)  | Ls   | L2   | M (UNC) | B    | L1   | ØB1  |
| 1/4        | 0.42             | 2.95 | 1.30 | 1.65 | 0.35 | 0.35 | 1.42 | 1.65 | 0.24 | 0.24 | 7/16-20  | 2.23 | 1.71 | 1/4-20  | 1.10 | 0.39 | 0.56 |
| 3/8        | 0.50             | 2.95 | 1.30 | 1.65 | 0.35 | 0.35 | 1.42 | 1.65 | 0.24 | 0.24 | 7/16-20  | 2.23 | 1.71 | 1/4-20  | 1.10 | 0.39 | 0.70 |
| 1/2        | 0.59             | 2.95 | 1.30 | 1.65 | 0.35 | 0.35 | 1.42 | 1.65 | 0.24 | 0.24 | 7/16-20  | 2.23 | 1.71 | 1/4-20  | 1.10 | 0.39 | 0.86 |
| 3/4        | 0.79             | 3.15 | 1.52 | 1.91 | 0.35 | 0.35 | 1.42 | 1.97 | 0.24 | 0.28 | 7/16-20  | 2.44 | 1.82 | 5/16-18 | 1.36 | 0.51 | 1.07 |
| 1          | 0.98             | 3.54 | 1.76 | 2.30 | 0.43 | 0.43 | 1.65 | 1.97 | 0.24 | 0.28 | 9/16-18  | 2.79 | 2.10 | 5/16-18 | 1.65 | 0.51 | 1.34 |
| 1-1/4      | 1.26             | 4.33 | 2.13 | 2.48 | 0.43 | 0.43 | 1.65 | 2.76 | 0.24 | 0.35 | 9/16-18  | 3.37 | 2.68 | 3/8-16  | 2.05 | 0.63 | 1.69 |
| 1-1/2      | 1.50             | 4.72 | 2.42 | 2.81 | 0.55 | 0.55 | 1.97 | 2.76 | 0.28 | 0.35 | 3/4-16   | 3.81 | 3.05 | 3/8-16  | 2.30 | 0.63 | 1.93 |
| 2          | 1.97             | 5.51 | 2.95 | 3.08 | 0.55 | 0.55 | 1.97 | 2.76 | 0.28 | 0.35 | 3/4-16   | 4.36 | 3.59 | 3/8-16  | 2.81 | 0.67 | 2.42 |
| 2-1/2      | 2.50             | 7.28 | 3.62 | 3.94 | 0.67 | 0.67 | 2.76 | 4.02 | 0.35 | 0.43 | 7/8-14   | 5.75 | 4.36 | 9/16-12 | 3.41 | 0.67 | 2.91 |
| 3          | 2.99             | 8.07 | 2.93 | 4.27 | 0.67 | 0.67 | 2.76 | 4.02 | 0.35 | 0.43 | 7/8-14   | 6.34 | 4.93 | 9/16-12 | 3.98 | 0.67 | 3.54 |
| 4          | 3.95             | 9.45 | 3.76 | 5.51 | 0.87 | 0.87 | —    | 4.02 | —    | 0.43 | 1-1/8-12 | 7.87 | 6.26 | 5/8-11  | 5.20 | 0.79 | 4.53 |

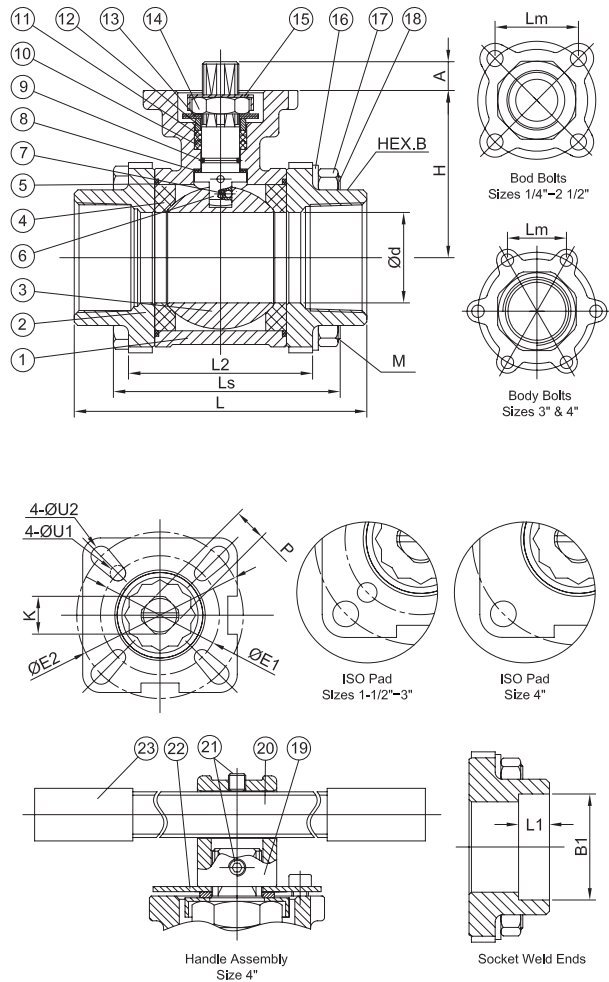
# FIGURE 310AM

## STAINLESS STEEL BALL VALVES



### 3-PC FULL PORT 1000 CWP W/ ISO MOUNTING PAD

#### PARTS DIAGRAM



#### PART MATERIALS & QUANTITY

| Ref # | Description (in.)  | Material   | Qty          |
|-------|--------------------|--|--------------|
| 1     | Body               | ASTM A351 Gr. CF8M Stainless   | 1            |
| 2     | End Cap            | NPT SW<br>ASTM A351 Gr. CF8M Stainless<br>ASTM A351 Gr. CF3M Stainless | 2            |
| 3     | Ball               | 316SS Stainless  | 1            |
| 4     | Seat               | RTFE   | 2            |
| 5     | Body Gasket        | PTFE   | 2            |
| 6     | Stem               | 316SS Stainless  | 1            |
| 7     | Anti-Static Device | 316SS Stainless  | 2            |
| 8     | Thrust Washer      | PTFE   | 1            |
| 9     | O-Ring             | FKM  | 1            |
| 10    | V-Ring Packing     | PTFE   | 1 set        |
| 11    | Bushing            | 50% Stainless+50% PTFE   | 1            |
| 12    | Gland              | 316SS Stainless  | 1            |
| 13    | Belleville Washer  | 301SS Stainless  | 2            |
| 14    | Stem Nut           | ASTM A194-8 Stainless  | 1            |
| 15    | Stop-Lock-Cap      | 304SS Stainless  | 1            |
| 16    | Bolt Washer        | 1/4-2<br>2-1/2<br>3-4<br>304SS Stainless                               | 4<br>8<br>12 |
| 17    | Bolt Washer        | 1/4-2<br>2-1/2<br>3-4<br>ASTM A194-8 Stainless                         | 4<br>8<br>12 |
| 18    | Body Nut           | 1/4-3<br>4<br>ASTM A193-B8 Stainless                                   | 4<br>6       |
| 19    | Handle Adapter 4   | ASTM A351 Gr. CF8 Stainless  | 1            |
| 20    | Pipe Handle 4      | ASTM A53 Steel+Zinc Plating  | 1            |
| 21    | Set Screw 4        | ASTM A193-B8 Stainless   | 1            |
| 22    | Triangle Stopper 4 | 420SS Stainless  | 1            |
| 23    | Handle Sleeve 4    | Vinyl Plastic  | 1            |

#### REPAIR KITS

**FNW 310ARK**

SIZE CODE (IN.)

- |              |           |
|--------------|-----------|
| 1/4-3/8 = BC | 1-1/2 = J |
| 1/2 = D      | 2 = K     |
| 3/4 = F      | 2-1/2 = L |
| 1 = G        | 3 = M     |
| 1-1/4 = H    |           |