



# SERIES M55

## General Purpose Three-Piece Ball Valves 1/4" to 4" Full Port 800 / 1000 PSI



### DESIGN ADVANTAGES

- For general industrial and chemical applications.
- Three-piece swing-out design allows in-line maintenance.
- Full port orifice minimizes pressure drop and prolongs life.
- Blow-out proof stem.
- Available in stainless steel and carbon steel.
- Investment cast body construction.

### STANDARDS

**DESIGN & CONSTRUCTION:** ASME B16.34 | ASME B16.11  
ASME B16.25 | ISO 5211

**THREAD & CONNECTION INTERFACES:** ASME B1.20.1

**TESTING & QUALIFICATION:** API 598

**CERTIFICATION & DOCUMENTATION:** CE 0343 PED 2014/68/EU Cat. II Mod. D1 | EN 10204-3.1

### END CONNECTIONS

- Threaded End
- Socket Weld
- Butt Weld
- Extended Butt Weld with Fins

### SPECIFICATIONS

**CONSTRUCTION:** Three-Piece Body, Full Port

**SIZE:** 1/4" to 4"    **STEM:** 316 S.S.

**BODY:** CF8M, WCB    **SEAT:** RTFE / Other Seat Options

**BALL:** 316 S.S. / CF8M

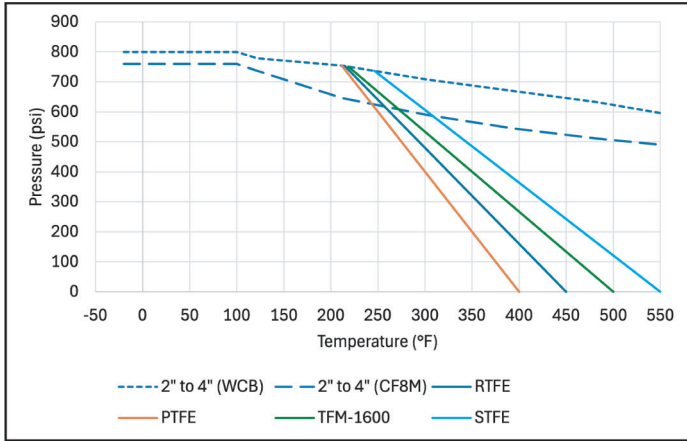
**PRESSURE RATING:** 800/1000 PSI



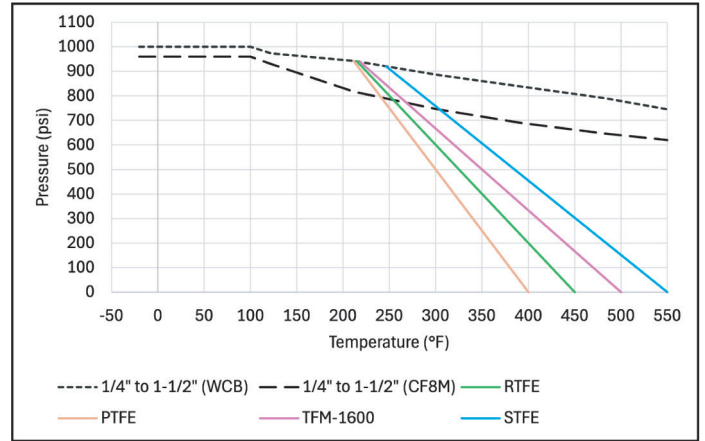
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## PRESSURE VS. TEMPERATURE SERIES M55 2" TO 4"



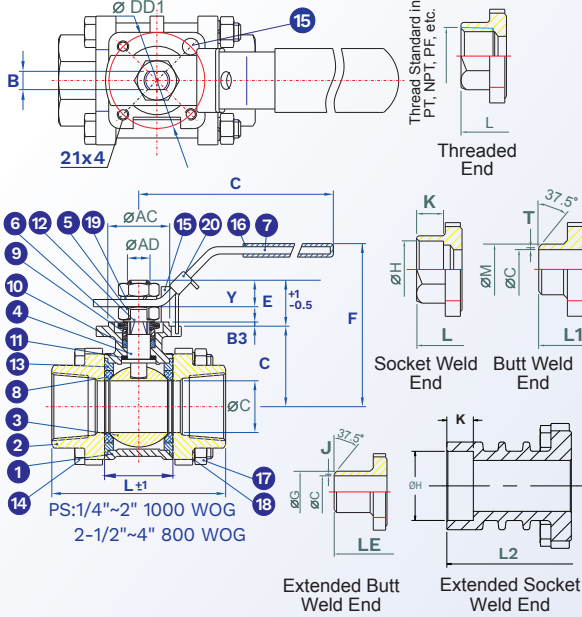
## PRESSURE VS. TEMPERATURE SERIES M55 1/4" TO 1-1/2"



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# M55 MATERIALS LIST



| NO. | PART NAME                                       | STANDARD MATERIALS                         | OPTIONAL MATERIALS          | QTY. |
|-----|---|--|-----------------------------|------|
| 1   | Body  | ASTM A351 GRADE CF8M / ASTM A216 GRADE WCB |                             | 1    |
| 2   | Body End Cap (Threaded)                         | ASTM A351 GRADE CF8M / ASTM A216 GRADE WCB |                             | 2    |
| 2   | Body End Cap Socket (Socket Weld)               | ASTM A351 GRADE CF8M / ASTM A216 GRADE WCB |                             | 2    |
| 2   | Body End Cap Butt (Butt Weld)                   | ASTM A351 GRADE CF8M / ASTM A216 GRADE WCB |                             | 2    |
| 2   | Body End Cap Extended Butt (Extended Butt Weld) | ASTM A351 GRADE CF8M / ASTM A216 GRADE WCB |                             | 2    |
| 3   | Ball  | ASTM A276 316SS, ASTM A351 Grade CF8M      |                             | 1    |
| 4   | Stem  | ASTM A276 316SS                            |                             | 1    |
| 5   | Stem Nut  | AISI 304                                   |                             | 2    |
| 6   | Stem Packing Belleville Washer                  | AISI 301                                   |                             | 2    |
| 7   | Handle  | AISI 304                                   |                             | 1    |
| 8   | Seat  | RTFE                                       | PTFE, STFE, CTFE, TFM™-1600 | 2    |
| 9   | Stem Packing Gland                              | AISI 304                                   |                             | 1    |
| 10  | Stem Packing                                    | PTFE                                       |                             | *    |
| 11  | Stem Seal                                       | RTFE                                       |                             | 1    |
| 12  | Stem Lock Handle                                | AISI 304                                   |                             | 1    |
| 13  | Body Joint Gasket                               | PTFE                                       |                             | 2    |
| 14  | Body Bolt                                       | AISI 304                                   |                             | *    |
| 15  | Handle Stop Pin                                 | AISI 304                                   |                             | 1    |
| 16  | Handle Sleeve                                   | VINYL                                      |                             | 1    |
| 17  | Body Bolt Nut                                   | AISI 304                                   |                             | *    |
| 18  | Body Bolt Washer                                | AISI 304                                   |                             | *    |
| 19  | Stem Washer                                     | AISI 304                                   |                             | 1    |
| 20  | Handle Lock                                     | AISI 304                                   |                             | 1    |

## DIMENSIONS (IN)

| SIZE   | A    | B     | C     | D    | E    | F    | Y    | H    | L    | L2    | K    | L1   | M    | T    | AC   | AD    | DD1   | Z1  | ISO 5211 | LBS  |
|--------|------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|------|-------|-------|-----|----------|------|
| 1/4"   | 0.46 | 0.256 | 5.12  | 1.15 | 0.78 | 2.95 | 0.29 | 0.56 | 2.51 | 5.43  | 0.39 | 2.47 | 0.64 | 0.06 | 0.98 | 0.374 | 1.417 | M5  | F03      | 1.4  |
| 3/8"   | 0.5  | 0.256 | 5.12  | 1.15 | 0.78 | 2.95 | 0.29 | 0.69 | 2.51 | 5.43  | 0.39 | 2.47 | 0.69 | 0.06 | 0.98 | 0.374 | 1.417 | M5  | F03      | 1.4  |
| 1/2"   | 0.59 | 0.256 | 5.12  | 1.15 | 0.71 | 2.95 | 0.25 | 0.86 | 2.59 | 5.43  | 0.39 | 2.59 | 0.89 | 0.06 | 0.98 | 0.374 | 1.417 | M5  | F03      | 1.4  |
| 3/4"   | 0.79 | 0.256 | 5.12  | 1.28 | 0.8  | 3.03 | 0.32 | 1.07 | 3    | 5.94  | 0.51 | 3    | 1.08 | 0.06 | 0.98 | 0.374 | 1.417 | M5  | F03      | 1.7  |
| 1"     | 0.98 | 0.315 | 6.3   | 1.53 | 0.81 | 3.35 | 0.48 | 1.33 | 3.39 | 6.46  | 0.51 | 3.39 | 1.34 | 0.06 | 1.18 | 0.433 | 1.654 | M5  | F04      | 2.4  |
| 1-1/4" | 1.26 | 0.315 | 6.3   | 1.59 | 0.98 | 3.62 | 0.45 | 1.69 | 4.05 | 6.77  | 0.51 | 4.05 | 1.68 | 0.06 | 1.18 | 0.433 | 1.654 | M5  | F04      | 3.7  |
| 1-1/2" | 1.5  | 0.382 | 7.28  | 1.82 | 1.22 | 4.02 | 0.54 | 1.93 | 4.7  | 6.97  | 0.51 | 4.7  | 1.91 | 0.06 | 1.38 | 0.551 | 1.969 | M6  | F05      | 5.5  |
| 2"     | 1.97 | 0.382 | 7.28  | 2.15 | 1.22 | 4.33 | 0.54 | 2.41 | 5.17 | 7.87  | 0.63 | 5.17 | 2.38 | 0.06 | 1.38 | 0.551 | 1.969 | M6  | F05      | 8    |
| 2-1/2" | 2.56 | 0.472 | 10.24 | 2.81 | 1.68 | 5.91 | 0.91 | 2.91 | 6.46 | 8.86  | 0.63 | 6.46 | 3    | 0.08 | 2.17 | 0.748 | 2.756 | M8  | F07      | 16.2 |
| 3"     | 3.15 | 0.472 | 10.24 | 3.33 | 1.55 | 6.38 | 0.74 | 3.54 | 7.19 | 9.33  | 0.63 | 7.19 | 3.54 | 0.08 | 2.76 | 0.748 | 4.016 | M10 | F10      | 23.5 |
| 4"     | 3.94 | 0.591 | 11.42 | 4.19 | 2.06 | 7.48 | 1.35 | 4.55 | 9.28 | 10.94 | 0.79 | 9.3  | 4.57 | 0.14 | 2.76 | 0.945 | 4.016 | M10 | F10      | 43.7 |

## HOW TO ORDER

| 1) Series           | 2) Body Material                        | 3) Connection  | 4) Size   | 5) Seats  |
|---------------------|---|--|---|---|
| M55                 | S - Stainless Steel<br>C - Carbon Steel | TH - Threaded<br>SW - Socket Weld<br>BW - Butt Weld<br>EW - Extended Butt Weld<br>ES - Extended Socket Weld<br>TE - NPT X Extended Butt Weld<br>TS - NPT X Socket Weld<br>TB - NPT X Butt Weld<br>NE - No Ends | 0025 - 1/4"<br>0038 - 3/8"<br>0050 - 1/2"<br>0075 - 3/4"<br>0100 - 1"<br>0125 - 1-1/4"<br>0150 - 1-1/2"<br>0200 - 2"<br>0250 - 2-1/2"<br>0300 - 3"<br>0400 - 4" | R - RTFE<br>P - PTFE<br>S - 50/50 STFE<br>C - CTFE<br>T - TFM™-1600 |
| 6) Ball             | 7) Stem                                 | 8) O-Ring  | 9) Operator   |   |
| X - Stainless Steel | X - Stainless Steel<br>F - A286         | X - Not Required   | X - Manual Handle<br>G - Gear Operator<br>C - Gear Operator with Chainwheel<br>B - Bare Stem  |   |

## Breakaway Torque (RTFE)&Cv Value

| SIZE   | MAX  | CV   |
|--------|------|------|
| 1/4"   | 37   | 7    |
| 3/8"   | 37   | 8    |
| 1/2"   | 37   | 15   |
| 3/4"   | 54   | 40   |
| 1"     | 90   | 70   |
| 1-1/4" | 117  | 110  |
| 1-1/2" | 174  | 250  |
| 2"     | 296  | 430  |
| 2-1/2" | 612  | 700  |
| 3"     | 679  | 1100 |
| 4"     | 1500 | 2000 |

Break Away Torque Standard valves are assembled with silicon-free based in lubricant, torque for dry assembled valves please consult factory

How to Order: {1}{2}-{3}-{4}-{5}{6}{7}{8}-{9}  
Example: M55S-TH-0025-RXXX-X



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# SERIES M55 AUTOMATED ASSEMBLIES

## DOUBLE ACTING

### 60 PSI | STAINLESS STEEL

| SIZE   | Part Number                   |
|--------|-------------------------------|
| 1/4"   | M55S-TH-0025-RXXX/ZPD1DABA-XX |
| 3/8"   | M55S-TH-0038-RXXX/ZPD1DABA-XX |
| 1/2"   | M55S-TH-0050-RXXX/ZPD1DABA-XX |
| 3/4"   | M55S-TH-0075-RXXX/ZPD1DABA-XX |
| 1"     | M55S-TH-0100-RXXX/ZPD2DABA-XX |
| 1-1/4" | M55S-TH-0125-RXXX/ZPD2DABA-XX |
| 1-1/2" | M55S-TH-0150-RXXX/ZPD3DABA-XX |
| 2"     | M55S-TH-0200-RXXX/ZPD4DABA-XX |
| 2-1/2" | M55S-TH-0250-RXXX/ZPD6DABA-XX |
| 3"     | M55S-TH-0300-RXXX/ZPD7DABX-XX |
| 4"     | M55S-TH-0400-RXXX/ZPD8DABX-XX |

### 80 PSI | STAINLESS STEEL

| SIZE   | Part Number                   |
|--------|-------------------------------|
| 1/4"   | M55S-TH-0025-RXXX/ZPD1DABA-XX |
| 3/8"   | M55S-TH-0038-RXXX/ZPD1DABA-XX |
| 1/2"   | M55S-TH-0050-RXXX/ZPD1DABA-XX |
| 3/4"   | M55S-TH-0075-RXXX/ZPD1DABA-XX |
| 1"     | M55S-TH-0100-RXXX/ZPD2DABA-XX |
| 1-1/4" | M55S-TH-0125-RXXX/ZPD2DABA-XX |
| 1-1/2" | M55S-TH-0150-RXXX/ZPD3DABA-XX |
| 2"     | M55S-TH-0200-RXXX/ZPD4DABA-XX |
| 2-1/2" | M55S-TH-0250-RXXX/ZPD6DABA-XX |
| 3"     | M55S-TH-0300-RXXX/ZPD6DABA-XX |
| 4"     | M55S-TH-0400-RXXX/ZPD8DABX-XX |

## SPRING RETURN

### 60 PSI | STAINLESS STEEL

| SIZE   | Part Number                   |
|--------|-------------------------------|
| 1/4"   | M55S-TH-0025-RXXX/ZPD2S4BA-XX |
| 3/8"   | M55S-TH-0038-RXXX/ZPD2S4BA-XX |
| 1/2"   | M55S-TH-0050-RXXX/ZPD2S4BA-XX |
| 3/4"   | M55S-TH-0075-RXXX/ZPD3S4BA-XX |
| 1"     | M55S-TH-0100-RXXX/ZPD4S4BA-XX |
| 1-1/4" | M55S-TH-0125-RXXX/ZPD5S4BA-XX |
| 1-1/2" | M55S-TH-0150-RXXX/ZPD6S4BA-XX |
| 2"     | M55S-TH-0200-RXXX/ZPD7S4BX-XX |
| 2-1/2" | M55S-TH-0250-RXXX/ZPD9S4BX-XX |
| 3"     | M55S-TH-0300-RXXX/ZPD9S4BX-XX |
| 4"     | M55S-TH-0400-RXXX/ZPD8S4BX-XX |

### 80 PSI | STAINLESS STEEL

| SIZE   | Part Number                   |
|--------|-------------------------------|
| 1/4"   | M55S-TH-0025-RXXX/ZPD2S5BA-XX |
| 3/8"   | M55S-TH-0038-RXXX/ZPD2S5BA-XX |
| 1/2"   | M55S-TH-0050-RXXX/ZPD2S5BA-XX |
| 3/4"   | M55S-TH-0075-RXXX/ZPD2S5BA-XX |
| 1"     | M55S-TH-0100-RXXX/ZPD3S5BA-XX |
| 1-1/4" | M55S-TH-0125-RXXX/ZPD4S5BA-XX |
| 1-1/2" | M55S-TH-0150-RXXX/ZPD5S5BA-XX |
| 2"     | M55S-TH-0200-RXXX/ZPD6S5BA-XX |
| 2-1/2" | M55S-TH-0250-RXXX/ZPD8S5BX-XX |
| 3"     | M55S-TH-0300-RXXX/ZPD8S5BX-XX |
| 4"     | M55S-TH-0400-RXXX/ZPDAS5BX-XX |

## ELECTRIC

### ON/OFF | STAINLESS STEEL

| SIZE   | Part Number                 |
|--------|-----------------------------|
| 1/4"   | M55S-TH-0025-RXXX/ZE2XXX-XX |
| 3/8"   | M55S-TH-0038-RXXX/ZE2XXX-XX |
| 1/2"   | M55S-TH-0050-RXXX/ZE2XXX-XX |
| 3/4"   | M55S-TH-0075-RXXX/ZE2XXX-XX |
| 1"     | M55S-TH-0100-RXXX/ZE2XXX-XX |
| 1-1/4" | M55S-TH-0125-RXXX/ZE2XXX-XX |
| 1-1/2" | M55S-TH-0150-RXXX/ZE2XXX-XX |
| 2"     | M55S-TH-0200-RXXX/ZE2XXX-XX |
| 2-1/2" | M55S-TH-0250-RXXX/ZE3XXX-XX |
| 3"     | M55S-TH-0300-RXXX/ZE3XXX-XX |
| 4"     | M55S-TH-0400-RXXX/ZE5XXX-XX |

### MODULATING | STAINLESS STEEL

| SIZE   | Part Number                 |
|--------|-----------------------------|
| 1/4"   | M55S-TH-0025-RXXX/ZE2XXX-MX |
| 3/8"   | M55S-TH-0038-RXXX/ZE2XXX-MX |
| 1/2"   | M55S-TH-0050-RXXX/ZE2XXX-MX |
| 3/4"   | M55S-TH-0075-RXXX/ZE2XXX-MX |
| 1"     | M55S-TH-0100-RXXX/ZE2XXX-MX |
| 1-1/4" | M55S-TH-0125-RXXX/ZE2XXX-MX |
| 1-1/2" | M55S-TH-0150-RXXX/ZE2XXX-MX |
| 2"     | M55S-TH-0200-RXXX/ZE2XXX-MX |
| 2-1/2" | M55S-TH-0250-RXXX/ZE3XXX-MX |
| 3"     | M55S-TH-0300-RXXX/ZE3XXX-MX |
| 4"     | M55S-TH-0400-RXXX/ZE5XXX-MX |



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M55/Q1-26

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