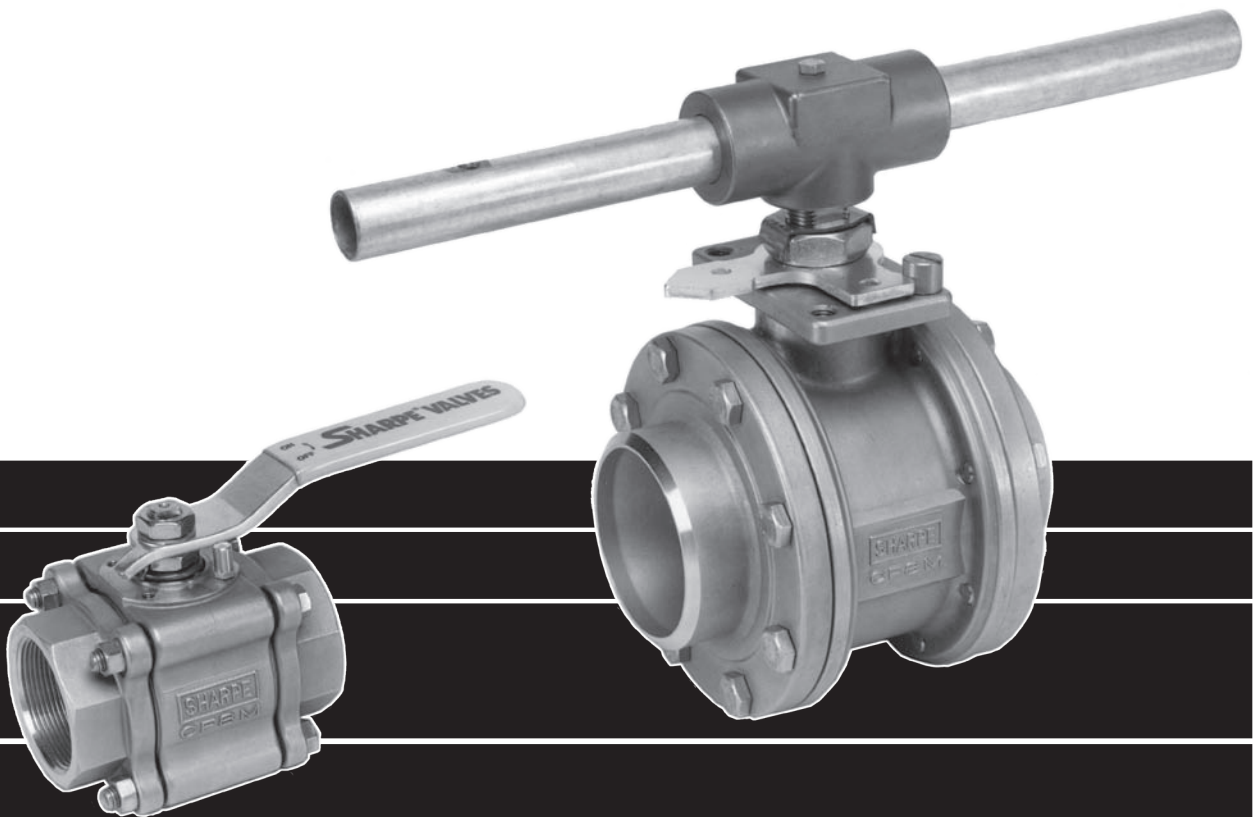


SHARPE[®] VALVES



**SERIES 84
HIGH PERFORMANCE
3 PIECE BALL VALVES**

SHARPE® HIGH PERFORMANCE VALVES

Sharpe® Series 84 Ball Valves offer as standard features, advantages that other valve manufacturers offer only as costly extras. This is the Sharpe® advantage.

STANDARD FEATURES

3-Piece Design

Bottom Entry Live Loaded Stem

High Cycle Stem Packing

Fully Encapsulated Body Seals

Integral Mounting Pad

Lockable Handle

Slotted Seat Design

Choice of Seats and Seals

Variety of End Combinations

Floating Ball Design

Encapsulated Body Bolts

Traceability

ADVANTAGES

In-line serviceable swing-out center section allows easy access to internal valve components without disturbing alignment of pipe. Functions as both valve and union.

Self adjusts with pressure and temperature fluctuations. Blow-out proof anti-static design helps prevent accidents and injuries.

PEEK and Nova* thrust bearings and stem seals extend valve cycle life over conventional ball valves and are the best choice for actuation.

Allows valve ends to be welded in line without disassembly, saving costly labor time. Also prevents seal ruptures in high pressure or steam applications.

Ideal for actuation. Centering lip feature assures precise alignment of bracket, stem and coupler. Actuators may be retrofitted on existing Series 84 without disruption of line integrity. Allows for secondary containment unit to be added when necessary.

All Sharpe® Series 84 Valves meet OSHA standards with locking device. Keeps valves from being opened or closed accidentally.

Relief slots help equalize body pressure, reduce torque and assure leak-tight sealing. Seats also provide a wiping action that cleans ball and seats each time valve is cycled.

A wide variety of seat and seal materials are readily available for the most demanding applications, including Buna, Delrin, Nova*, PEEK, EPDM, Viton®, TFE, RTFE, TFM®, Grafoil, and UHMWPE.

A wide choice of optional end connections are available including, but not limited to threaded ends, socket weld ends, butt weld ends, flush bottom tank pads, flanged ends.

Precision engineered solid stainless steel ball with relief hole in stem slot prevents build up of cavity pressure while valve is in open position. Bi-directional floating ball seats downstream reduce torque and guarantee a bubble-tight shut off.

Heavy duty stainless steel bolting is protected from outside environment assuring valve integrity.

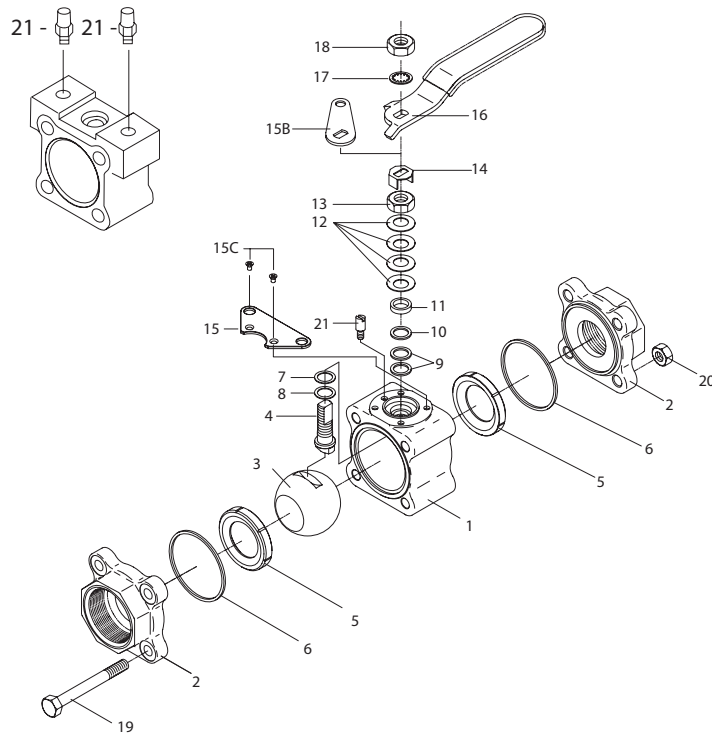
Heat numbers are provided on all valve bodies and ends. CMTR's (certified mill test reports) are available upon request.

* Carbon and Graphite Filled TFE
*** TFM is a trademark of DYNELON, LLC.

SERIES 84 VALVE PARTS AND IDENTIFICATION

1/4", 3/8", 1/2"

3/4" - 2-1/2"

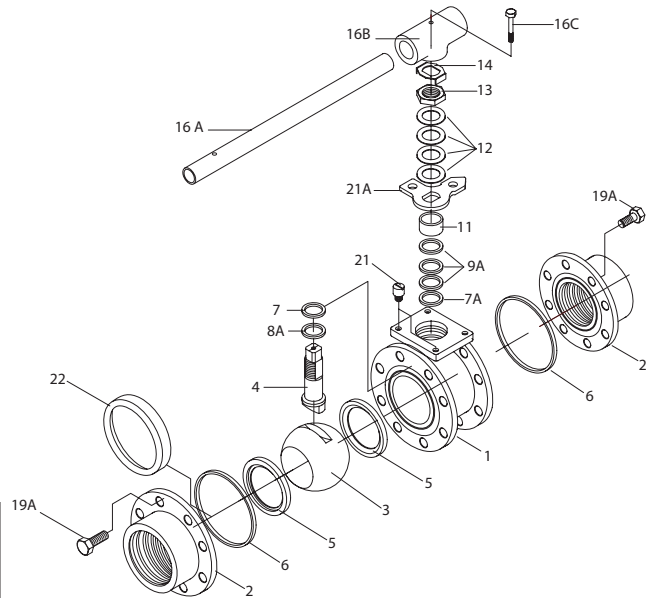


| PART NO. | PART | QTY. | MATERIAL |
|----------|------------------------------|------|--|
| 1 | Body* | 1 | 316 Stainless Steel ASTM A351 CF8M Alloy 20 ASTM A351 CN7M Carbon Steel ASTM A216 WCB Hastelloy C ASTM A494 TYPE CW-12MW Monel ASTM A494 GR M35-1 Brass ASTM B584 GR C 86500 |
| 2 | Pipe Ends* | 2 | 316L Stainless Steel ASTM A351 CF3M Alloy 20 ASTM A351 CN7M Carbon Steel ASTM A216 WCB Hastelloy C ASTM A494 TYPE CW-12MW Monel ASTM A494 GR M35-1 Brass ASTM B584 GR C 86500 |
| 3 | Ball | 1 | 316 Stainless Steel Alloy 20 Monel Hastelloy C Brass ASTM B584 GR C 86500 |
| 4 | Stem | 1 | 316 Stainless Steel Alloy 20 Monel Hastelloy C 17-4PH (Standard - Delrin & PEEK seats) Brass ASTM B584 GR C 86500 |
| 5 | Valve Seat | 2 | TFE Reinforced TFE TFM (Super TFE) Nova Delrin UHMWPE PEEK |
| 6 | Body Seal | 2 | TFE Neoprene Grafoil UHMWPE Buna EPR |
| 7 | Thrust Bearing | 1 | Nova (UHMWPE with UHMWPE Seats) |
| 7A | Stem Location Ring (3" & 4") | 1 | Stainless Steel |
| 8 | Thrust Bearing | 1 | PEEK (UHMWPE with UHMWPE Seats) |
| 8A | Thrust Bearing | 1 | Nova (UHMWPE with UHMWPE Seats) |
| 9 | Stem Packing | 2 | Nova (UHMWPE with UHMWPE Seats) |
| 9A | Stem Packing (3" & 4") | 3 | Nova (UHMWPE with UHMWPE Seats) |
| 10 | Seal Protector | 1 | PEEK |
| 11 | Gland Packing | 1 | Stainless Steel |

| APPLICABLE STANDARDS | |
|----------------------|----------------------|
| Body Wall Thickness | ASME B16.34 |
| SW & Threaded Ends | ASME B16.11 |
| Butt-weld Ends | ASME B16.25 |
| Flange Dimensions | ASME B16.5 |
| Basic Design | ASME B16.34 (note 1) |
| Testing (Options) | ASME B16.34 API 598 |

Note 1: When specified, valves can be furnished in accordance with ASME B16.34 requirements.

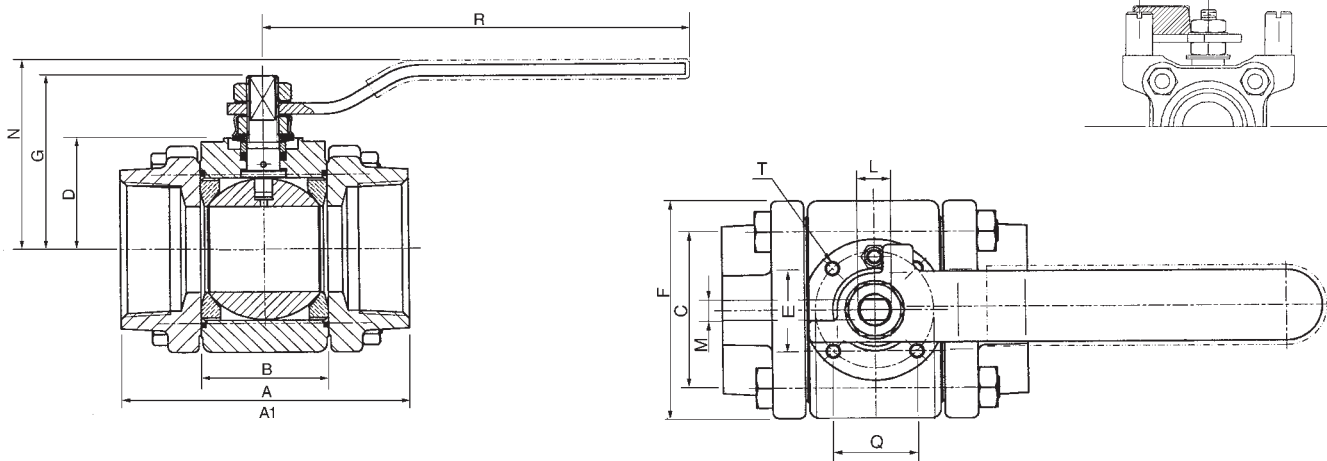
3" - 4"



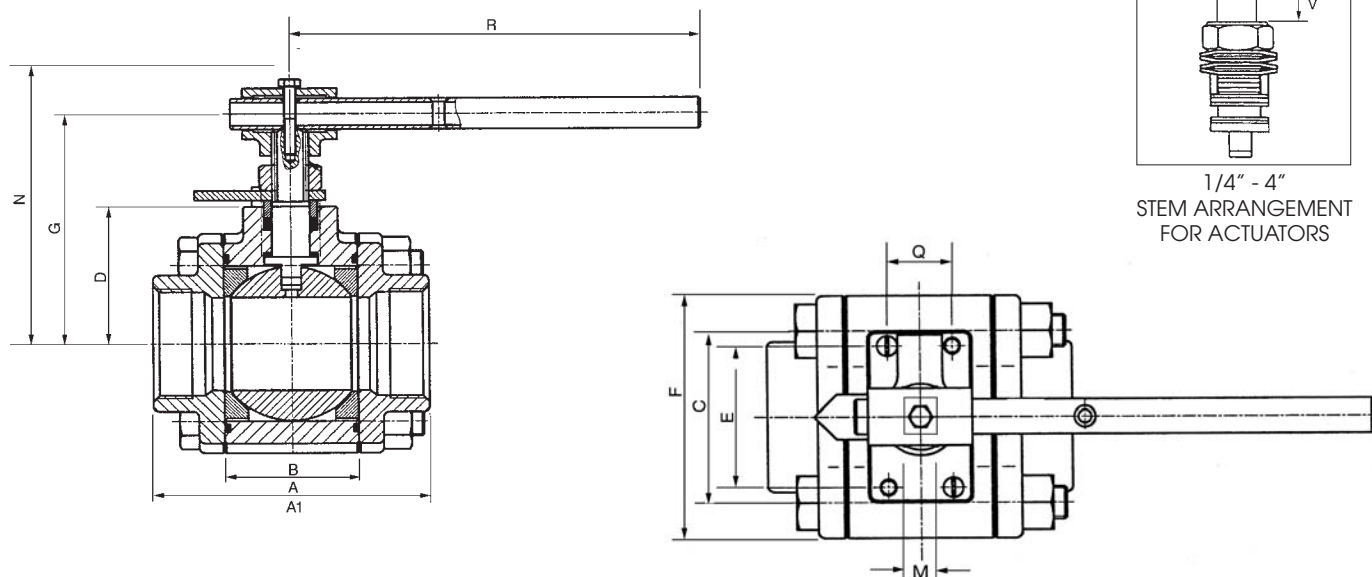
| PART NO. | PART | QTY. | MATERIAL |
|----------|-----------------------|--------|------------------------------------|
| 12 | Belleville Washer | 4 | Stainless Steel |
| 13 | Packing Nut | 1 | Stainless Steel |
| 14 | Lock Tab | 1 | Stainless Steel |
| 15 | Lower Lock Latch | 1 | Stainless Steel |
| 15B | Upper Lock Latch Bolt | 1 | Stainless Steel |
| 15C | Latch Bolt | 1 | Stainless Steel |
| 16 | Handle (1/4"-2") | 1 | Stainless Steel |
| 16A | Wrench (3" & 4") | 1 | Cad Plate Carbon Steel |
| 16B | Wrench Block | 1 | Stainless Steel |
| 16C | Hex Head Bolt | 1 | Stainless Steel |
| 17 | Lock Washer | 1 | Stainless Steel |
| 18 | Handle Nut (1/4"-2") | 1 | Stainless Steel |
| 19 | Body Bolts | 4 | Stainless Steel |
| 19A | Body Connector Nut | 8 | Stainless Steel |
| 20 | Nuts | 4 | Stainless Steel |
| 21 | Stop Pin (1/4"-1/2") | 1 2 | Stainless Steel Stainless Steel |
| 21A | Stopper | 1 | Stainless Steel |
| 22 | Seat Retainer | 1 1 | Stainless Steel Carbon Steel |

* Valves furnished with Delrin or PEEK seats will use a tongue and groove joint design for the body end seal configuration.

SERIES 84 DIMENSIONS

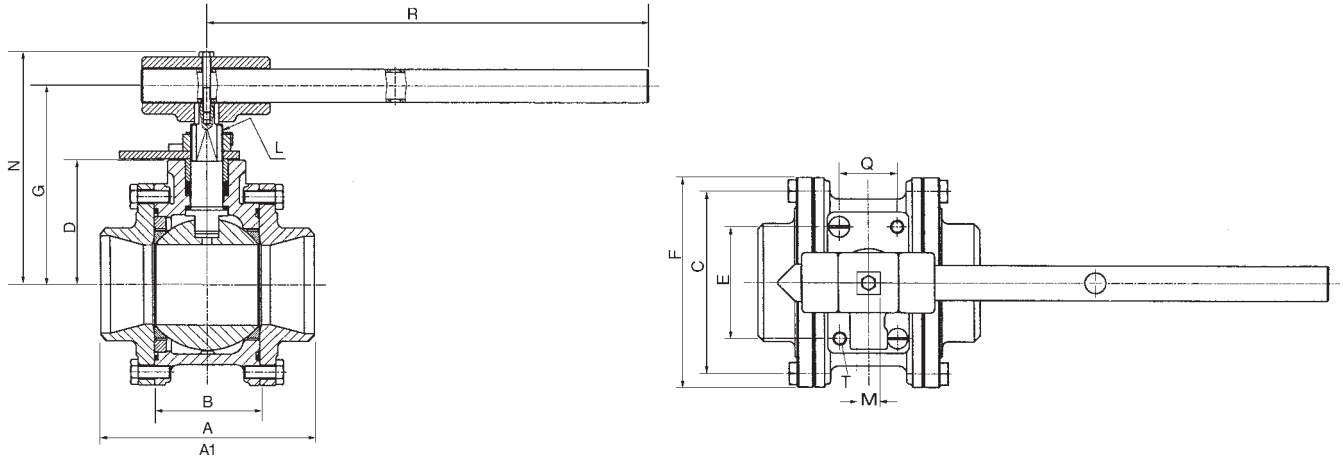


| SIZE | A | A1(BW) | B | C | D | E | F | G | L | M | N | Q | R | T | 1/4", 3/8" & 1/2" | V |
|--------|------|--------|------|------|------|------|------|------|---------------|-----|------|------|------|--------------|-------------------|-----|
| 1/4" | 2.54 | 2.62 | .813 | 1.25 | .939 | - | 1.75 | 1.50 | 3/8" -24 UNF | .22 | 1.76 | - | 4.62 | 1/4" -20 UNC | 1.90 | .28 |
| 3/8" | 2.54 | 2.62 | .813 | 1.25 | .939 | - | 1.75 | 1.50 | 3/8" -24 UNF | .22 | 1.76 | - | 4.62 | 1/4" -20 UNC | 1.90 | .28 |
| 1/2" | 2.54 | 2.62 | .813 | 1.25 | .939 | - | 1.75 | 1.50 | 3/8" -24 UNF | .22 | 1.76 | - | 4.62 | 1/4" -20 UNC | 1.90 | .28 |
| 3/4" | 2.78 | 2.87 | .969 | 1.50 | 1.24 | 1.00 | 2.05 | 1.59 | 3/8" -24 UNF | .22 | 1.87 | 1.00 | 4.50 | M5 | - | .28 |
| 1" | 3.68 | 3.72 | 1.25 | 1.75 | 1.51 | 1.18 | 2.42 | 2.19 | 7/16" -20 UNF | .30 | 2.40 | 1.18 | 5.75 | M5 | - | .30 |
| 1-1/4" | 4.22 | 4.24 | 1.63 | 2.00 | 1.65 | 1.18 | 2.70 | 2.38 | 7/16" -20 UNF | .30 | 2.70 | 1.18 | 5.75 | M5 | - | .30 |
| 1-1/2" | 4.55 | 4.58 | 1.91 | 2.25 | 1.71 | 1.38 | 3.16 | 2.88 | 9/16" -18 UNF | .35 | 3.16 | 1.38 | 7.00 | M6 | - | .42 |
| 2" | 5.00 | 5.03 | 2.22 | 2.62 | 1.87 | 1.38 | 3.56 | 3.06 | 9/16" -18 UNF | .35 | 3.35 | 1.38 | 7.00 | M6 | - | .42 |



| SIZE | A | A1(BW) | B | C | D | E | F | G | L | M | N | Q | R | T | V |
|--------|------|--------|------|------|------|------|------|------|-----|-----|------|------|-------|----|-----|
| 2-1/2" | 5.86 | 5.86 | 2.86 | 3.35 | 2.92 | 2.75 | 4.57 | 4.56 | M20 | .55 | 5.58 | 1.25 | 10.00 | M8 | .55 |

SERIES 84 DIMENSIONS



| SIZE | A | A1(BW) | B | C | D | E | F | G | L | M | N | Q | R | T | V |
|------|------|--------|------|------|------|------|------|------|-----------|------|------|------|-------|-----|-----|
| 3" | 6.66 | 6.66 | 3.28 | 5.50 | 3.92 | 3.38 | 6.44 | 6.52 | 1"-14 UNS | .745 | 7.62 | 1.75 | 13.8 | M10 | .66 |
| 4" | 8.40 | 8.40 | 4.28 | 6.97 | 4.48 | 3.38 | 8.12 | 7.08 | 1"-14 UNS | .745 | 8.18 | 1.75 | 22.00 | M10 | .66 |

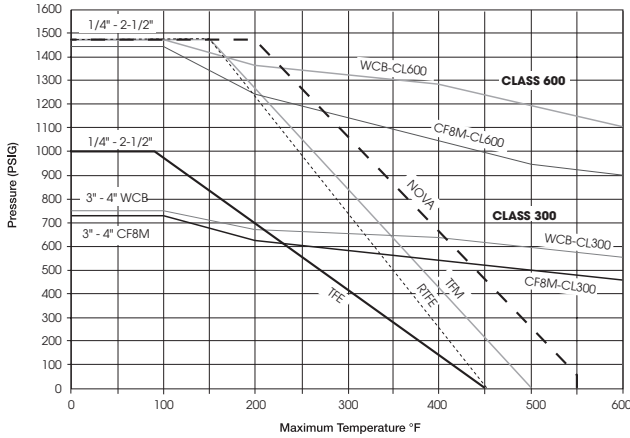
PERFORMANCE DATA

| VALVE SIZE | FLOW COEFF. Cv | EQUIVALENT LENGTH OF SCH. 40 PIPE FEET | APPROX. WEIGHT | PORT SIZE |
|------------|----------------|--|----------------|-----------|
| 1/4" | 8 | 1.9 | 1.20 | .44 |
| 3/8" | 8 | 1.9 | 1.20 | .44 |
| 1/2" | 8 | 1.9 | 1.20 | .44 |
| 3/4" | 12 | 6.3 | 1.70 | .56 |
| 1" | 32 | 3.1 | 3.00 | .81 |
| 1-1/4" | 46 | 6.3 | 4.00 | 1.00 |
| 1-1/2" | 80 | 4.3 | 6.00 | 1.25 |
| 2" | 120 | 7.5 | 8.00 | 1.50 |
| 2-1/2" | 240 | 5.00 | 25.00 | 2.00 |
| 3" | 350 | 8.3 | 30.00 | 2.50 |
| 4" | 720 | 10.4 | 50.20 | 3.25 |

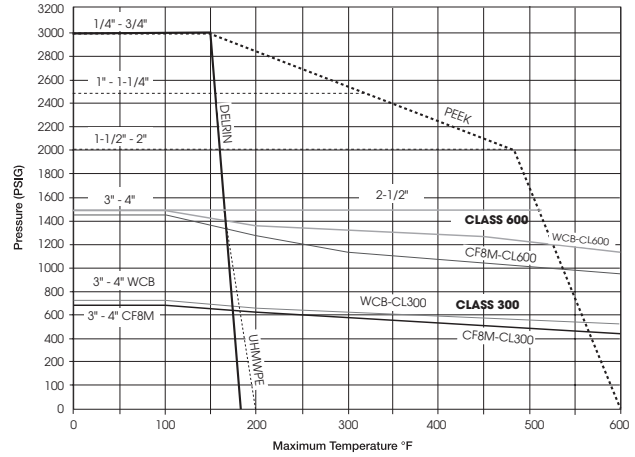
Due to ongoing development of our product line, specifications subject to change without notice.

1. TFM seats are standard. Other seat materials are readily available.
- 2.. Delrin and UHMWPE seats should not be used for steam service.
3. Delrin must not be used in Oxygen applications.

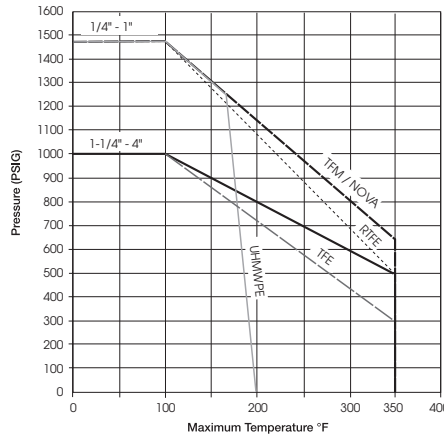
SEAT PRESSURE/TEMPERATURE RATING SERIES 84



SEAT PRESSURE/TEMPERATURE RATING SERIES 84



SEAT PRESSURE/TEMPERATURE RATING SERIES 84 - BRASS



HOW TO ORDER

| VALVE SIZE | VALVE SERIES | BODY & ENDS | BALL & STEM | SEAT | SEAL | ENDS | OPTIONS |
|------------|--------------|---------------------|-----------------|--------------------|--|-------------------------------------|--|
| 1/4" | 84 | 4 = Carbon Steel | 6 = 316 S/S | T = TFE | B = Buna | TE = Threaded Ends (NPT) | X = Oxygen Service |
| 3/8" | | 6 = Stainless Steel | 2 = Alloy 20 | R = Reinforced TFE | N = Neoprene | TEB = Threaded Ends (BSPT) | OH = Oval Handle |
| 1/2" | | 2 = Alloy 20 | 3 = Monel | N = Nova | V = Viton® | BW = Butt Weld Sch. 5, 10, 40, & 80 | F = Fugitive Emissions Certified ANSI S93.00.01 |
| 3/4" | | 3 = Monel | 5 = Hastelloy C | D = Delrin | T = TFE | SW = Socket Weld | E = Extended Stem |
| 1" | | 5 = Hastelloy C | 1 = Brass | U = UHMWPE | U = UHMWPE | FBE = Flush Bottom Tank Flange | L = Lockable Extended Stem |
| 1-1/4" | | 1 = Brass | | P = PEEK | G = Grafoil | 1 = 150RF Flange | D = Leak Detection Stem |
| 1-1/2" | | | | M = TFM™ | E = Ethylene Propylene Rubber (EPR) | 3 = 300RF Flange | GO = Gear Operator |
| 2" | | | | | | 6 = 600RF Flange (1/2" - 2-1/2") | 7 = 17-4PH Stem |
| 2-1/2" | | | | | | | A = Nace |
| 3" | | | | | | | |
| 4" | | | | | | | |

3/4" 84 6 6 T T TE X

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