



**TYPE E5 MAIN VALVE**

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## HIGH PRESSURE-HIGH LIFT

## LOW DIFFERENTIAL

**SIZES 3/4" - 12"**

**PRESSURES to 300 PSIG at 600°F**

- Normally Closed
- Single Seat
- Balanced Hycar Diaphragm
- Protected Main Spring
- Long Main Spring Operates on 5 psi Minimum Differential
- Internal & External Condensation Chambers
- Fluid, Gas & Vapor Applications
- Accurate Regulation Unaffected by Service Conditions
- ANSI/FCI 70-2 Class IV Shutoff
- Virtually Frictionless for Long Service Life
- Packless Construction
- Easy In-line Maintenance
- Wide Variety of Pilots for Many Applications
- Lifetime Warranty against Wiredrawing of Seat & Disc \*

### APPLICATION DATA

- Pressure Regulating for Steam Distribution
- High Pressure/Low Differential Pressure Regulating
- Fluid Regulation
- For use with Self-contained, Pneumatic or Electronic Pilots
- Slow Start-up or Shutdown

SIZING INFO

### VALVE RATINGS

| Valve Ends<br>ASME/ANSI | Pressure<br>PSIG (bar) | Temperature<br>°F (°C) |
|-------------------------|------------------------|------------------------|
|-------------------------|------------------------|------------------------|

#### CAST IRON

|                         |            |             |
|-------------------------|------------|-------------|
| Class 250 NPT           | 250 (17.2) | @ 450 (232) |
| B16.1 Class 125 Flanged | 125 (8.6)  | @ 450 (232) |
| B16.1 Class 250 Flanged | 250 (17.2) | @ 450 (232) |

#### CAST STEEL

|                          |            |             |
|--------------------------|------------|-------------|
| B16.34 Class 300 NPT     | 300 (21.0) | @ 600 (315) |
| B16.34 Class 150 Flanged | 150 (10.3) | @ 500 (260) |
| B16.34 Class 300 Flanged | 300 (21.0) | @ 600 (315) |

Other pressure/temperature ratings available; consult factory.

Maximum downstream pressure is 300 psi.

Canadian Registration # OC 0591.9C

*Installation Tip:* Add EZ Connections for ease of maintenance

### OPTIONS

- Composition Disc for liquid, air or gas service
- Balanced Construction
- Integral Mount Pilot
- Secoweld
- EZ Connections

### TYPICAL CONFIGURATIONS

- PRESSURE REDUCING .....TYPE E5D
- AIR ADJUSTED .....TYPE E5A
- BACK PRESSURE .....TYPE E5Q
- PUMP GOVERNOR .....TYPE E5P
- LOAD ALLOCATING .....TYPE E5FD
- AIR CONTROLLED .....TYPE E5AP60
- ELECTRONIC SLOW START .....TYPE E5D208D
- SOLENOID CONTROLLED .....TYPE E5MD
- SOLENOID ACTUATED .....TYPE E5M
- DIFFERENTIAL .....TYPE E5N
- TEMPERATURE CONTROL .....TYPE E5T

### RATED FLOW COEFFICIENTS (Cv)

| SEAT<br>FACTOR | REGULATOR SIZE |      |       |       |    |       |    |     |     |     |     |      |      |
|----------------|----------------|------|-------|-------|----|-------|----|-----|-----|-----|-----|------|------|
|                | 3/4            | 1    | 1 1/4 | 1 1/2 | 2  | 2 1/2 | 3  | 4   | 5   | 6   | 8   | 10   | 12   |
| Full           | 7.6            | 11.7 | 18.9  | 27.4  | 43 | 67    | 95 | 159 | 258 | 350 | 665 | 1018 | 1611 |
| Normal         | 5.7            | 10.0 | 13.4  | 19.8  | 25 | 35    | 59 | 120 | 176 | 228 | 366 | 525  | 952  |

\* When installed according to factory specifications.

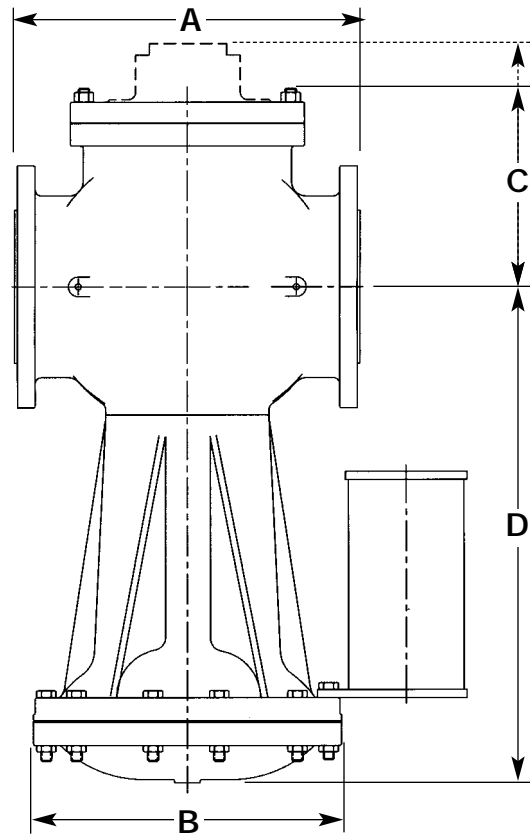
# TYPE E5 MAIN VALVE

## SPECIFICATION

The valve shall be self-operated, external pilot type, single seated, diaphragm actuated, normally closed design. The valve will function quickly and shut tight on dead end service. Internal parts including seats, discs and stems shall be of stainless steel. The diaphragm shall be a balanced Hycar material for high lift. There shall be an external condensation chamber supplied. The main valve spring shall operate on a 5 psi minimum differential. There shall be no springs in the steam flow path and no stuffing box. The valve shall be easy to maintain with all parts accessible without removal from the line.

### MATERIALS OF CONSTRUCTION

Body, Cast Iron .....ASTM A126 Cl. B  
 Body, Cast Bronze .....ASTM B61 UNS C92200  
 Body, Cast Steel .....ASTM A216 WCB  
 Stem .....303 St. Stl. ASTM A582  
 Disc 3/4 - 5" .....420 St. Stl. ASTM A582 Cond A  
 Disc 6 - 12" .....304 St. Stl. ASTM A167/A240  
 Seat 3/4 - 5" .....420 St. Stl. ASTM A582 Cond A  
 Seat 6 - 12" .....316 St. Stl. ASTM A743 CF-8M  
 Gasket .....Non-asbestos  
 Diaphragm .....Hycar  
 Spring .....Steel



TYPE E5 MAIN VALVE

FITTINGS

### DIMENSIONS inches (mm) AND WEIGHTS pounds (kg)

| SIZE          | A, CI          |                 |                 | B               | C                |                  |                |                | D*              | APPROX. WT                     |               |               |               |               |
|---------------|----------------|-----------------|-----------------|-----------------|------------------|------------------|----------------|----------------|-----------------|--------------------------------|---------------|---------------|---------------|---------------|
|               | ANSI<br>NPT    | ANSI<br>125     | ANSI<br>250     |                 | Std. Mount       |                  | Integral Mount |                |                 | Iron, Brz.<br>Stl. ANSI<br>NPT | Iron          |               | Steel         |               |
|               |                |                 |                 |                 | ANSI<br>125      | SCR<br>250       | CI             | Stl.           |                 |                                | ANSI<br>125   | ANSI<br>250   | ANSI<br>150   | ANSI<br>300   |
| 3/4<br>(19)   | 4 3/4<br>(111) | —               | —               | 2 7/8<br>(73)   | 11 1/4<br>(286)  | 11 1/4<br>(286)  | 3 5/8<br>(92)  | 3 1/2<br>(89)  | 6 7/8<br>(175)  | 23<br>(10)                     | —             | —             | —             | —             |
| 1<br>(25)     | 5 3/8<br>(137) | 5 1/2<br>(140)  | 6<br>(152)      | 3 5/8<br>(92)   | 11 5/8<br>(295)  | 11 5/8<br>(295)  | 4 3/8<br>(111) | 4 3/8<br>(111) | 6 7/8<br>(175)  | 24<br>(11)                     | 30<br>(14)    | 33<br>(15)    | 35<br>(16)    | 39<br>(18)    |
| 1 1/4<br>(32) | 6 1/2<br>(165) | 6 3/4<br>(171)  | 7 1/4<br>(184)  | 4 1/8<br>(105)  | 13 1/2<br>(343)  | 13 1/2<br>(343)  | 4<br>(102)     | 4 5/8<br>(117) | 9 1/8<br>(232)  | 49<br>(22)                     | 46<br>(21)    | 49<br>(22)    | 58<br>(26)    | 63<br>(29)    |
| 1 1/2<br>(38) | 7 1/4<br>(184) | 6 7/8<br>(175)  | 7 3/8<br>(187)  | 4 3/8<br>(111)  | 13 5/8<br>(346)  | 13 5/8<br>(346)  | 4 1/2<br>(114) | 5<br>(127)     | 9 1/8<br>(232)  | 53<br>(24)                     | 58<br>(26)    | 68<br>(31)    | 67<br>(30)    | 74<br>(34)    |
| 2<br>(51)     | 7 1/2<br>(191) | 8 1/2<br>(216)  | 9<br>(229)      | 5 1/4<br>(133)  | 16 1/4<br>(413)  | 16 1/4<br>(413)  | 5<br>(127)     | 5 5/8<br>(143) | 11 1/8<br>(283) | 84<br>(38)                     | 90<br>(41)    | 97<br>(44)    | 113<br>(51)   | 120<br>(55)   |
| 2 1/2<br>(64) | —              | 9 3/8<br>(238)  | 10<br>(254)     | 5 3/4<br>(146)  | 16 1/2<br>(419)  | 16 1/2<br>(419)  | 5 5/8<br>(137) | 6<br>(152)     | 11 1/8<br>(283) | —                              | 97<br>(44)    | 112<br>(51)   | 130<br>(59)   | 135<br>(61)   |
| 3<br>(76)     | —              | 10<br>(254)     | 10 3/4<br>(273) | 6 5/8<br>(168)  | 19 1/4<br>(489)  | 19 1/4<br>(489)  | 6 3/8<br>(162) | 7<br>(178)     | 13 1/2<br>(343) | —                              | 148<br>(67)   | 170<br>(77)   | 210<br>(95)   | 226<br>(103)  |
| 4<br>(102)    | —              | 11 7/8<br>(302) | 12 1/2<br>(318) | 7 5/8<br>(194)  | 18 3/8<br>(467)  | 23 3/8<br>(594)  | 6 5/8<br>(168) | 8<br>(203)     | 13 1/2<br>(343) | —                              | 208<br>(95)   | 293<br>(133)  | 307<br>(139)  | 330<br>(150)  |
| 5<br>(127)    | —              | 13 5/8<br>(346) | 14 1/2<br>(368) | 8 1/2<br>(216)  | 18 3/4<br>(476)  | 23 3/4<br>(603)  | 7 3/8<br>(187) | 8 3/4<br>(222) | 13 1/2<br>(343) | —                              | 240<br>(109)  | 333<br>(151)  | 335<br>(152)  | 366<br>(166)  |
| 6<br>(152)    | —              | 15 1/8<br>(384) | 16<br>(406)     | 10<br>(254)     | 23 1/2<br>(597)  | 27 3/8<br>(695)  | 7<br>(178)     | —              | 16 3/4<br>(425) | —                              | 348<br>(158)  | 616<br>(280)  | 560<br>(254)  | 503<br>(274)  |
| 8<br>(203)    | —              | 19<br>(483)     | 20<br>(508)     | 11 1/2<br>(292) | 23 3/4<br>(603)  | 29 5/8<br>(752)  | 9 1/4<br>(235) | —              | 16 3/4<br>(425) | —                              | 650<br>(295)  | 814<br>(370)  | 795<br>(361)  | 862<br>(392)  |
| 10<br>(254)   | —              | 23 5/8<br>(600) | 25<br>(635)     | 13 3/4<br>(349) | 30 3/4<br>(781)  | 35 5/8<br>(899)  | —              | —              | 20<br>(508)     | —                              | 910<br>(414)  | 1130<br>(513) | 1345<br>(611) | 1420<br>(645) |
| 12<br>(305)   | —              | 26 1/2<br>(673) | 28<br>(711)     | 15 7/8<br>(403) | 39 3/4<br>(1010) | 39 3/4<br>(1010) | —              | —              | 24 3/4<br>(629) | —                              | 1580<br>(718) | 1920<br>(872) | 1990<br>(904) | 2160<br>(982) |

\*Add 150% to D dimension for stem removal clearance.

