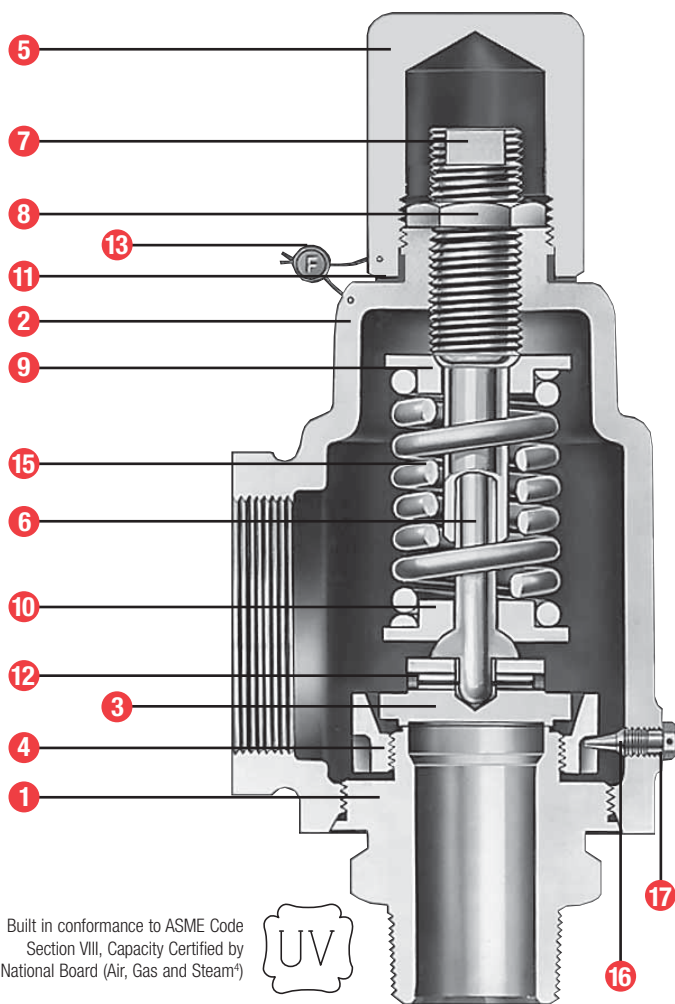


Series 2856

Pressure Relief Valves for Air, Steam, Vapor & Liquid Service



- Built in conformance to ASME Code Section VIII for Air, Steam, and Vapor Service.
- Set pressures to 300 psig.
- Brass body and trim - bronze bonnet.



Built in conformance to ASME Code Section VIII, Capacity Certified by National Board (Air, Gas and Steam*)



Bill of Materials

| Item No. | Part Name | Material |
|-----------|----------------------------------|--------------------------------|
| 1 | Body | ASTM B16 H.H. Brass |
| 2 | Bonnet | SB-62 Bronze |
| 3 | Disc | ASTM B16 H.H. Brass |
| 4 | Blow Down Ring | 316 St. St. |
| 5 | Cap, Plain Screwed | Brass |
| 6 | Stem | 316 St. St. |
| 7 | Spring Adj. Screw | Brass |
| 8 | Jam Nut | Brass |
| 9 | Spring Button (Upper) | 316 St. St. |
| 10 | Spring Button (Lower) | 316 St. St. |
| 11 | Cap Gasket | 316 St. St. |
| 12 | Grooved Pin | Hardened Stainless Steel |
| 13 | Wire Seal | Stainless Steel Wire/Lead Seal |
| 14 | Nameplate (not shown) | Stainless Steel |
| 15 | Spring | 316 St. St. |
| 16 | Blow Down Ring Lock Screw | 316 St. St. |
| 17 | Blow Down Ring Lock Screw Gasket | 316 St. St. |
| not shown | Body Gasket (2" inlet size only) | 316 St. St. |

Selection Table (Connections: MNPT x FNPT)

| Type Number ¹ | Valve Size Inlet x Outlet | Maximum Set Pressure ² | | Maximum Back Pressures | | Materials | |
|--------------------------|---------------------------|-----------------------------------|--------------------------|------------------------|---------------|----------------|-------------|
| | | psig -400°F to +400°F | barg -240°C to +204°C | psig @ 100°F | barg @ 37.8°C | Body / Bonnet | Spring |
| 285603-M20 | 3/4 x 1-1/4 | 300 | 20.7 | 50 | 3.45 | Brass / Bronze | 316 St. St. |
| 285604-M20 | 1 x 1-1/2 | | | | | | |
| 285606-M20 | 1-1/2 x 2-1/2 | | | | | | |
| 285608-M20 | 2 x 3 | 250 | 17.2 | | | | |

General Notes:

1. Type numbers shown designate valves with plain screwed caps. Test lever required for air, steam or hot water service (above 140°F / 60°C). For packed lever change the three digit type number suffix from "-M20" to "-M40". Example: 285603-M20 becomes 285603-M40.
2. Maximum set pressure for steam service is 240 psig (saturation temperature of 400°F)
3. For 1/2" x 1" size see 1896M Catalog 296C.
4. Also suitable for liquid service where ASME Code certification is not required.

Capacity Tables – U.S. Customary System Units

ASME Pressure Vessel Code (UV)

| Air – 10% Overpressure | | | | |
|--|-----|------|-------|------|
| Capacities in Standard Cubic Feet Per Minute at 60° F ¹ | | | | |
| Set Pressure (psig) | 3/4 | 1 | 1-1/2 | 2 |
| 15 | 93 | 160 | 375 | 601 |
| 20 | 108 | 185 | 433 | 693 |
| 30 | 136 | 234 | 547 | 877 |
| 40 | 168 | 288 | 674 | 1079 |
| 50 | 199 | 342 | 800 | 1282 |
| 60 | 231 | 396 | 926 | 1484 |
| 70 | 263 | 450 | 1053 | 1686 |
| 80 | 294 | 504 | 1179 | 1889 |
| 90 | 326 | 558 | 1305 | 2091 |
| 100 | 357 | 612 | 1432 | 2293 |
| 150 | 515 | 882 | 2063 | 3305 |
| 200 | 673 | 1152 | 2695 | 4317 |
| 250 | 830 | 1423 | 3327 | 5328 |
| 300 | 988 | 1693 | 3325 | – |

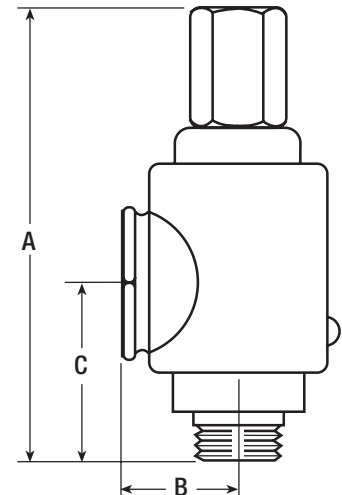
| Steam – 10% Overpressure | | | | |
|--|------|------|-------|-------|
| Capacities in Lbs. Per Hour at Saturation Temperature ¹ | | | | |
| Set Pressure (psig) | 3/4 | 1 | 1-1/2 | 2 |
| 15 | 263 | 451 | 1055 | 1689 |
| 20 | 303 | 520 | 1216 | 1948 |
| 30 | 384 | 658 | 1539 | 2464 |
| 40 | 473 | 810 | 1894 | 2981 |
| 50 | 561 | 961 | 2249 | 3498 |
| 60 | 650 | 1113 | 2604 | 4015 |
| 70 | 738 | 1265 | 2959 | 4532 |
| 80 | 827 | 1417 | 3313 | 5048 |
| 90 | 916 | 1569 | 3668 | 5565 |
| 100 | 1004 | 1720 | 4023 | 6082 |
| 150 | 1448 | 2479 | 5798 | 8666 |
| 200 | 1891 | 3238 | 7573 | 11249 |
| 240 | 2245 | 3846 | 8993 | 13317 |

Non-Code

| Water – 25% Overpressure | | | | |
|--|------|------|-------|------|
| Capacities in U.S. Gallons per minute at 70° F | | | | |
| Set Pressure (psig) | 3/4 | 1 | 1-1/2 | 2 |
| 15 | 10.3 | 18.1 | 41.0 | 72.7 |
| 20 | 11.9 | 21.0 | 47.3 | 84.0 |
| 30 | 14.6 | 25.7 | 58.0 | 102 |
| 40 | 16.8 | 29.7 | 67.0 | 118 |
| 50 | 18.8 | 33.2 | 74.9 | 132 |
| 60 | 20.6 | 36.3 | 82.0 | 145 |
| 70 | 22.3 | 39.3 | 88.6 | 157 |
| 80 | 23.8 | 42.0 | 94.7 | 168 |
| 90 | 25.3 | 44.5 | 100 | 178 |
| 100 | 26.6 | 46.9 | 105 | 187 |
| 150 | 32.6 | 57.5 | 129 | 230 |
| 200 | 37.7 | 66.4 | 149 | 265 |
| 250 | 42.1 | 74.2 | 167 | 297 |
| 300 | 46.1 | 81.3 | 183 | – |

| Actual Orifice Areas | | | | |
|----------------------|---------------------------------|-------|--------|-------|
| Inlet Size | Vapor, Gas & Steam ² | | Liquid | |
| | sq in | sq mm | sq in | sq mm |
| 3/4" | 0.240 | 155 | 0.109 | 70 |
| 1" | 0.411 | 265 | 0.192 | 124 |
| 1-1/2" | 0.961 | 620 | 0.433 | 279 |
| 2" | 1.539 | 993 | 0.768 | 495 |

| Dimensions & Weights | | | | | | | | |
|----------------------|----------------------------------|-----|---------|----|---------|-----|----------------|-----|
| Inlet Size | A (max) All Cap Constructions | | B | | C | | Approx. Weight | |
| | in | mm | in | mm | in | mm | lbs | kg |
| 3/4" x 1-1/4" | 8-3/16 | 208 | 1-11/16 | 43 | 2-13/16 | 71 | 3.5 | 1.6 |
| 1" x 1-1/2" | 8-11/16 | 221 | 1-15/16 | 29 | 3 | 76 | 5 | 2.3 |
| 1-1/2" x 2-1/2" | 10-7/16 | 265 | 2-5/8 | 67 | 4 | 102 | 11 | 5.0 |
| 2" x 3" | 1-1/16 | 332 | 3-3/16 | 81 | 4-3/8 | 111 | 20 | 9.1 |



Notes:

1. Capacities for Air & Steam at 30 PSIG and below are based on 3 psi overpressure.
2. For sizing purposes, the coefficients of discharge K_d are 0.652 for air, gas, vapor and steam; 0.576 for liquids.



Headquarters: 10195 Brecksville Road, Brecksville, OH 44141 USA • Telephone: 440-838-7690 • Fax: 440-838-7699 • <http://farris.cwfc.com>

Facilities: Brecksville, Ohio USA; Brantford, Ontario; Edmonton, Alberta, Canada; Bridport, Dorset, UK; Delhi, India; Tianjin, China

Offices worldwide. For a listing of our global sales network, visit our website at <http://farris.cwfc.com>.

While this information is presented in good faith and believed to be accurate, Farris Engineering, division of Curtiss-Wright Flow Control Corporation, does not guarantee satisfactory results from reliance on such information. Nothing contained herein is to be construed as a warranty or guarantee, expressed or implied, regarding the performance, merchantability, fitness or any other matter with respect to the products, nor as a recommendation to use any product or process in conflict with any patent. Farris Engineering, division of Curtiss-Wright Flow Control Corporation, reserves the right, without notice, to alter or improve the designs or specifications of the products described herein.