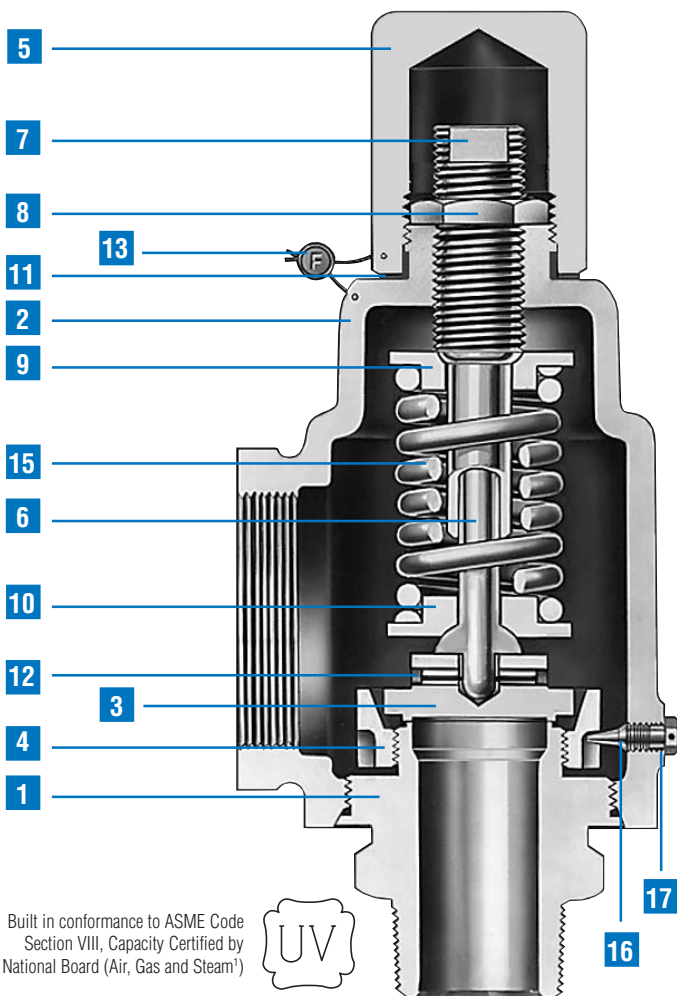


Series 2850

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.
- Stainless steel body and trim.



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 2850 & 2852 |
|----------|----------------------------------|--|
| 1 | Body | SA-479 Type 316 St. St. or SA-351 Gr. CF8M St. St. |
| 2 | Bonnet | SA-216 Gr. WCB Carbon Steel |
| 3 | Disc | 316 St. St. |
| 4 | Blow Down Ring | Stainless Steel |
| 5 | Cap | Carbon Steel |
| 6 | Stem | Stainless Steel |
| 7 | Spring Adj. Screw | Stainless Steel |
| 8 | Jam Nut | Stainless Steel |
| 9 | Spring Button (Upper) | Stainless Steel |
| 10 | Spring Button (Lower) | Stainless Steel |
| 11 | Cap Gasket | Stainless Steel |
| 12 | Grooved Pin | Stainless Steel |
| 13 | Wire Seal | Stainless Steel Wire/Lead Seal |
| 14 | Nameplate (not shown) | Stainless Steel |
| 15 | Spring | See Selection Table |
| 16 | Blow Down Ring Lock Screw | Stainless Steel. |
| 17 | Blow Down Ring Lock Screw Gasket | 316 St. St. |

General Notes:

1. Test lever required for air, steam, and hot water (above 140°F) service. For packed lever, add PKD to the Type Number. Example: 2850-PKD. For test gag, add W/TG.
2. For 1/2" x 1" size, see 1890 Series Catalog.
3. Also suitable for liquid service where ASME Code certification is not required.

Selection Table MNPT INLET X FNPT OUTLET

| Type Number | Maximum Set Pressure, psig | | | | Inlet Temp Range °F | Maximum Back Pressure psig at 100°F | Materials | |
|-------------|----------------------------|-----|-------|-------|---------------------|-------------------------------------|---------------------------|---------------------------|
| | Inlet | 3/4 | 1 | 1-1/2 | | | Body/ Bonnet | Spring |
| | Outlet | 1 | 1-1/2 | 2 | | | | |
| 2850 | 300 | 300 | 300 | 300 | -20 to +400 | 50 | 316 St. St./ Carbon Steel | 316 St. St. |
| 2852 | 300 | 300 | 300 | 300 | +400 to +750 | | | Chrome Alloy Rust Proofed |



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Capacity Tables: ASME PRESSURE VESSEL CODE (UV)

NON-CODE

| AIR 10% OVERPRESSURE Capacities in Standard Cubic Feet Per Minute at 60° F | | | |
|---|------|------|--------|
| Set Pressure (psig) | 3/4" | 1" | 1-1/2" |
| 15 | 94 | 161 | 375 |
| 20 | 108 | 185 | 433 |
| 40 | 168 | 288 | 674 |
| 60 | 231 | 396 | 926 |
| 80 | 294 | 504 | 1179 |
| 100 | 357 | 612 | 1431 |
| 120 | 420 | 720 | 1684 |
| 140 | 483 | 828 | 1936 |
| 160 | 546 | 936 | 2189 |
| 180 | 609 | 1044 | 2441 |
| 200 | 672 | 1152 | 2694 |
| 220 | 735 | 1260 | 2946 |
| 240 | 798 | 1368 | 3199 |
| 250 | 830 | 1422 | 3325 |
| 260 | 862 | 1476 | 3451 |
| 280 | 925 | 1584 | 3704 |
| 300 | 988 | 1692 | 3956 |

| STEAM 10% OVERPRESSURE Capacities in Lbs. Per Hour at Saturation Temperature | | | |
|---|------|------|--------|
| Set Pressure (psig) | 3/4" | 1" | 1-1/2" |
| 15 | 263 | 451 | 1054 |
| 20 | 303 | 520 | 1216 |
| 40 | 472 | 810 | 1893 |
| 60 | 650 | 1113 | 2602 |
| 80 | 827 | 1416 | 3312 |
| 100 | 1004 | 1720 | 4021 |
| 120 | 1181 | 2023 | 4730 |
| 140 | 1358 | 2327 | 5440 |
| 160 | 1535 | 2630 | 6149 |
| 180 | 1712 | 2933 | 6859 |
| 200 | 1889 | 3237 | 7568 |
| 220 | 2066 | 3540 | 8277 |
| 240 | 2243 | 3844 | 8987 |
| 250 | 2332 | 3995 | 9341 |
| 260 | 2420 | 4147 | 9696 |
| 280 | 2597 | 4450 | 10406 |
| 300 | 2775 | 4754 | 11115 |

| WATER 25% OVERPRESSURE Capacities in U.S. Gallons Per Minute at 70° F | | | |
|--|------|----|--------|
| Set Pressure (psig) | 3/4" | 1" | 1-1/2" |
| 15 | 10 | 18 | 40 |
| 20 | 11 | 20 | 45 |
| 40 | 17 | 30 | 67 |
| 60 | 21 | 36 | 82 |
| 80 | 24 | 42 | 95 |
| 100 | 27 | 47 | 106 |
| 120 | 29 | 52 | 116 |
| 140 | 32 | 56 | 125 |
| 160 | 34 | 60 | 134 |
| 180 | 36 | 63 | 142 |
| 200 | 38 | 67 | 150 |
| 220 | 40 | 70 | 157 |
| 240 | 41 | 73 | 164 |
| 250 | 42 | 74 | 168 |
| 260 | 43 | 76 | 171 |
| 280 | 45 | 79 | 177 |
| 300 | 46 | 81 | 184 |

Notes:

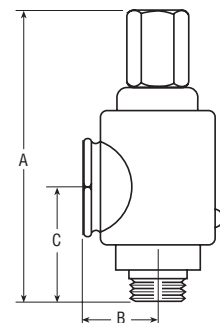
1. Capacities for Air & Steam at 30 psig and below are based on 3 psi overpressure.

| Effective Orifice Areas (Sq. In.) | | |
|-----------------------------------|--------------|----------------------|
| Inlet Size | Liquids Only | Vapors Gases & Steam |
| 3/4 | 0.098 | 0.164 |
| 1 | 0.173 | 0.281 |
| 1 1/2 | 0.390 | 0.657 |

Note: For sizing purposes, the coefficients of discharge K_d are 0.953 for air, gas and vapor; 0.64 for liquids.

| Dimensions & Weights (MNPT x FNPT) | | | | |
|------------------------------------|--------------------------------|---------|---------|-----------------------|
| Size | A (max.) All Cap Constructions | B | C | Approx. Weight (lbs.) |
| 3/4 x 1 | 8 | 1 11/16 | 2 5/8 | 3 1/2 |
| 1 x 1 1/2 | 9 1/16 | 1 15/16 | 3 | 5 |
| 1 1/2 x 2 | 11 15/16 | 2 7/16 | 3 11/16 | 11 |

Note: All dimensions are in inches.



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Printed in USA

01/06-5M-R4