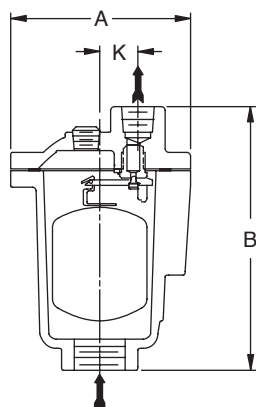


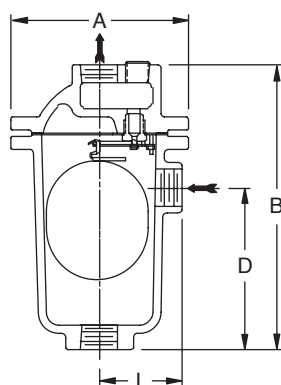


Free Floating Lever Air/Gas Vents—Cast Iron

For Pressures to 300 psig (21 bar) or Specific Gravity Down to 0.40



Model 1-AV



Model 2-AV, 3-AV and 6-AV



Armstrong free floating lever Air/Gas Vents use the same bodies, caps, lever mechanisms, valves and seats of Armstrong inverted bucket steam traps that have been proven in years of service.

Elliptical floats and high leverage make it possible to open large orifices to provide adequate capacity for vent size and weight. The hemispherical valve, seat and leverage are identical in design, materials and workmanship to those for saturated steam service up to 1,000 psig, with the exception of the addition of a guidepost to assure a positive, leaktight valve closing under all conditions.

1-AV—A cast iron air vent that uses a positive-closing free floating lever to ensure leaktight closing under all conditions. This vent is good for low capacity air/gas venting up to 300 psi.

For a fully detailed certified drawing, refer to CD #1070.

2-AV, 3-AV and 6-AV—Cast iron vents using the same proven free floating lever mechanisms used in Armstrong steam traps. For applications where high air/gas venting capacity is required up to 250 psi.

For a fully detailed certified drawing, refer to CD #1034.

Physical Data

| Model No. | Cast Iron | | | | | | | |
|---|---|--------|----------|--------|-----------------------------------|-----|-----------|--------|
| | 1-AV** | | 2-AV | | 3-AV | | 6-AV | |
| Pipe Connections | in | mm | in | mm | in | mm | in | mm |
| "A" | 1/2*, 3/4* | 15, 20 | 1/2, 3/4 | 15, 20 | 3/4, 1 | | 1-1/2, 2 | 40, 50 |
| "B" | 3-3/4 | 89 | 5-1/4 | 133 | 6-3/8 | 162 | 10-3/16 | 259 |
| "D" | 5-1/2 | 140 | 8-3/4 | 222 | 11-1/2 | 292 | 18 | 457 |
| "K" | - | - | 5-1/8 | 130 | 7 | 188 | 9-3/8 | 238 |
| "L" | 13/16 | 21 | - | - | - | - | - | - |
| Weight, lb (kg) | - | - | 2-7/16 | 62 | 2-7/8 | 73 | 4-5/8 | - |
| | 4 (1.8) | | 12 (5.5) | | 21 (9.5) | | 78 (35.5) | |
| Max. Allowable Pressure (Vessel Design) | 300 psig @ 200°F (21 bar @ 93°C) 250 psig @ 450°F (17 bar @ 232°C) | | | | 250 psig @ 450°F (17 bar @ 232°C) | | | |

*Inlet 1/2" (15 mm), Outlet 1/4" (8 mm)

*Inlet 3/4" (20 mm), Outlet 3/8" (10 mm)

**1-AV available with side connection if specified on order. On models 2-AV, 3-AV and 6-AV, pipe size of side connections is same as that of inlet and outlet connections.

Some floats are oil filled. Consult factory for details.

List of Materials

| Model No. | Valve & Seat | Leverage System | Float | Body & Cap | Gasket | Bolts | Nuts |
|-----------|-----------------|-----------------|-------|-----------------------------------|--------------|------------------|-----------------|
| 1-AV | Stainless Steel | | | ASTM A48 Class 30 Cast Iron | Non-asbestos | ASTM A193 Gr. B7 | ASTM A563 Gr. A |
| 2-AV | | | | | | SAE Gr. 2 | |
| 3-AV | | | | | | | |
| 6-AV | | | | | | | |





Free Floating Lever Air/Gas Vents—Cast Iron

For Pressures to 300 psig (21 bar) or Specific Gravity Down to 0.40



| 1-AV Maximum Operating Pressures | | |
|----------------------------------|----------------------------|-----|
| Minimum Specific Gravity | 0.80 | |
| Orifice Size (in) | Maximum Operating Pressure | |
| | psi | bar |
| 1/8 | 146 | 10 |
| 7/64 | 173 | 12 |
| #38 | 219 | 15 |
| 5/64 | 300 | 21 |

Maximum Operating Pressures of free floating lever vents with weighted floats for different orifice sizes, and the specific gravities on which they can be used.

| 2-AV Maximum Operating Pressures | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Specific Gravity* | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 | 0.60 | 0.55 | 0.50 | | | | | | | | | | | |
| Float wt., oz (g) | 7.7 (217) | 7.3 (206) | 6.9 (195) | 6.5 (184) | 6.1 (174) | 5.7 (163) | 5.4 (152) | 5.0 (141) | 4.6 (130) | 4.2 (119) | 3.8 (109) | | | | | | | | | | | |
| Orifice Size (in) | Maximum Operating Pressure | | | | | | | | | | | | | | | | | | | | | |
| | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | | |
| 5/16 | 27 | 1.8 | 25 | 1.8 | 24 | 1.7 | 23 | 1.6 | 22 | 1.5 | 20 | 1.4 | 19 | 1.3 | 18 | 1.2 | 16 | 1.1 | 15 | 1.0 | 14 | 0.9 |
| 1/4 | 44 | 3.0 | 42 | 2.9 | 40 | 2.7 | 38 | 2.6 | 35 | 2.4 | 33 | 2.3 | 31 | 2.1 | 29 | 2.0 | 27 | 1.8 | 24 | 1.7 | 22 | 1.5 |
| 3/16 | 97 | 6.7 | 92 | 6.4 | 88 | 6.0 | 83 | 5.7 | 78 | 5.4 | 73 | 5.0 | 68 | 4.7 | 64 | 4.4 | 59 | 4.1 | 54 | 3.7 | 49 | 3.4 |
| 5/32 | 167 | 12 | 159 | 11 | 151 | 10.4 | 142 | 9.8 | 134 | 9.3 | 126 | 8.7 | 118 | 8.1 | 110 | 7.6 | 101 | 7.0 | 93 | 6.4 | 85 | 5.8 |
| 1/8 | 250 | 17 | 250 | 17 | 250 | 17 | 244 | 17 | 230 | 16 | 216 | 15 | 202 | 14 | 187 | 13 | 173 | 12 | 159 | 11 | 145 | 10.0 |
| 7/64 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 240 | 17 | 222 | 15 | 204 | 14 | 186 | 13 |
| #38 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 231 | 16 |
| 5/64 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 |

| 3-AV Maximum Operating Pressures | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|----------------------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----|-----|------|-----|------|-----|-----|-----|-----|-----|-----|
| Specific Gravity* | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 | 0.60 | | | | | | | | | | | |
| Float wt., oz (g) | 14.9 (423) | 14.2 (402) | 13.4 (381) | 12.7 (360) | 12.0 (339) | 11.2 (318) | 10.5 (296) | 9.7 (275) | 9.0 (254) | | | | | | | | | | | |
| Orifice Size (in) | Maximum Operating Pressure | | | | | | | | | | | | | | | | | | | |
| | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar |
| 1/2 | 21 | 1.5 | 20 | 1.4 | 19 | 1.3 | 18 | 1.3 | 17 | 1.2 | 16 | 1.1 | 15 | 1.0 | 14 | 1.0 | 13 | 0.9 | 0.9 | |
| 3/8 | 45 | 3.1 | 43 | 3.0 | 41 | 2.8 | 38 | 2.7 | 36 | 2.5 | 34 | 2.3 | 32 | 2.2 | 30 | 2.0 | 27 | 1.9 | 1.9 | |
| 5/16 | 72 | 5.0 | 69 | 4.7 | 65 | 4.5 | 61 | 4.2 | 58 | 4.0 | 54 | 3.8 | 51 | 3.5 | 47 | 3.3 | 44 | 3.0 | 3.0 | |
| 9/32 | 96 | 6.6 | 91 | 6.3 | 87 | 6.0 | 82 | 5.6 | 77 | 5.3 | 72 | 5.0 | 68 | 4.7 | 63 | 4.3 | 58 | 4.0 | 4.0 | |
| 1/4 | 144 | 9.9 | 137 | 9.4 | 130 | 8.9 | 123 | 8.5 | 116 | 8.0 | 109 | 7.5 | 102 | 7.0 | 94 | 6.5 | 87 | 6.0 | 6.0 | |
| 7/32 | 206 | 14 | 196 | 13 | 186 | 13 | 176 | 12 | 165 | 11 | 155 | 10.7 | 145 | 10.0 | 135 | 9.3 | 125 | 8.6 | 8.6 | |
| 3/16 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 249 | 17 | 234 | 16 | 218 | 15 | 203 | 14 | 188 | 13 | 13 | |
| 5/32 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 |

| 6-AV Maximum Operating Pressures | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|------|--|
| Specific Gravity* | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 | 0.60 | 0.55 | 0.50 | 0.45 | 0.40 | | | | | | | | | | | | | | |
| Float wt., oz (g) | 73.5 (2,084) | 69.8 (1,979) | 66.2 (1,875) | 62.5 (1,771) | 58.8 (1,667) | 55.1 (1,563) | 51.5 (1,459) | 47.8 (1,354) | 44.1 (1,250) | 40.4 (1,146) | 36.8 (1,042) | 33.1 (938) | 29.4 (833) | | | | | | | | | | | | | | |
| Orifice Size (in) | Maximum Operating Pressure | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | psi | bar | |
| 1-1/16 | 22 | 1.5 | 21 | 1.5 | 20 | 1.4 | 19 | 1.3 | 18 | 1.2 | 17 | 1.2 | 16 | 1.1 | 14 | 1.0 | 13 | 0.9 | 12 | 0.8 | 11 | 0.8 | 10 | 0.70 | 9 | 0.62 | |
| 7/8 | 35 | 2.4 | 33 | 2.3 | 31 | 2.2 | 30 | 2.0 | 28 | 1.9 | 26 | 1.8 | 24 | 1.7 | 23 | 1.6 | 21 | 1.5 | 19 | 1.3 | 18 | 1.2 | 16 | 1.1 | 14 | 1 | |
| 3/4 | 50 | 3.5 | 48 | 3.3 | 45 | 3.1 | 43 | 3.0 | 40 | 2.8 | 38 | 2.6 | 35 | 2.4 | 33 | 2.3 | 30 | 2.1 | 28 | 1.9 | 25 | 1.8 | 23 | 1.6 | 20 | 1.4 | |
| 5/8 | 77 | 5.3 | 73 | 5.0 | 69 | 4.8 | 66 | 4.5 | 62 | 4.3 | 58 | 4.0 | 54 | 3.7 | 50 | 3.5 | 46 | 3.2 | 43 | 2.9 | 39 | 2.7 | 35 | 2.4 | 31 | 2.2 | |
| 9/16 | 102 | 7.0 | 97 | 6.7 | 92 | 6.3 | 87 | 6.0 | 82 | 5.6 | 77 | 5.3 | 72 | 4.9 | 67 | 4.6 | 62 | 4.2 | 57 | 3.9 | 51 | 3.6 | 46 | 3.2 | 41 | 3.9 | |
| 1/2 | 148 | 10.2 | 140 | 9.7 | 133 | 9.2 | 126 | 8.7 | 119 | 8.2 | 111 | 7.7 | 104 | 7.2 | 97 | 6.7 | 89 | 6.2 | 82 | 5.6 | 75 | 5.1 | 67 | 4.6 | 60 | 4.1 | |
| 7/16 | 210 | 14 | 200 | 14 | 189 | 13 | 179 | 12 | 168 | 12 | 158 | 11 | 148 | 10.2 | 137 | 9.5 | 127 | 8.7 | 116 | 8.0 | 106 | 7.3 | 96 | 6.6 | 85 | 5.9 | |
| 3/8 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 249 | 17 | 233 | 16 | 216 | 15 | 200 | 14 | 184 | 13 | 167 | 12 | 151 | 10.4 | 134 | 9.3 | |
| 11/32 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 245 | 17 | 223 | 15 | 201 | 14 | 179 | 12 | |
| 5/16 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 230 | 16 | |
| 9/32 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | |
| 1/4 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | 250 | 17 | |

*If specific gravity falls between those shown, use next lowest: e.g., if actual gravity is 0.73, use 0.70 specific gravity data.