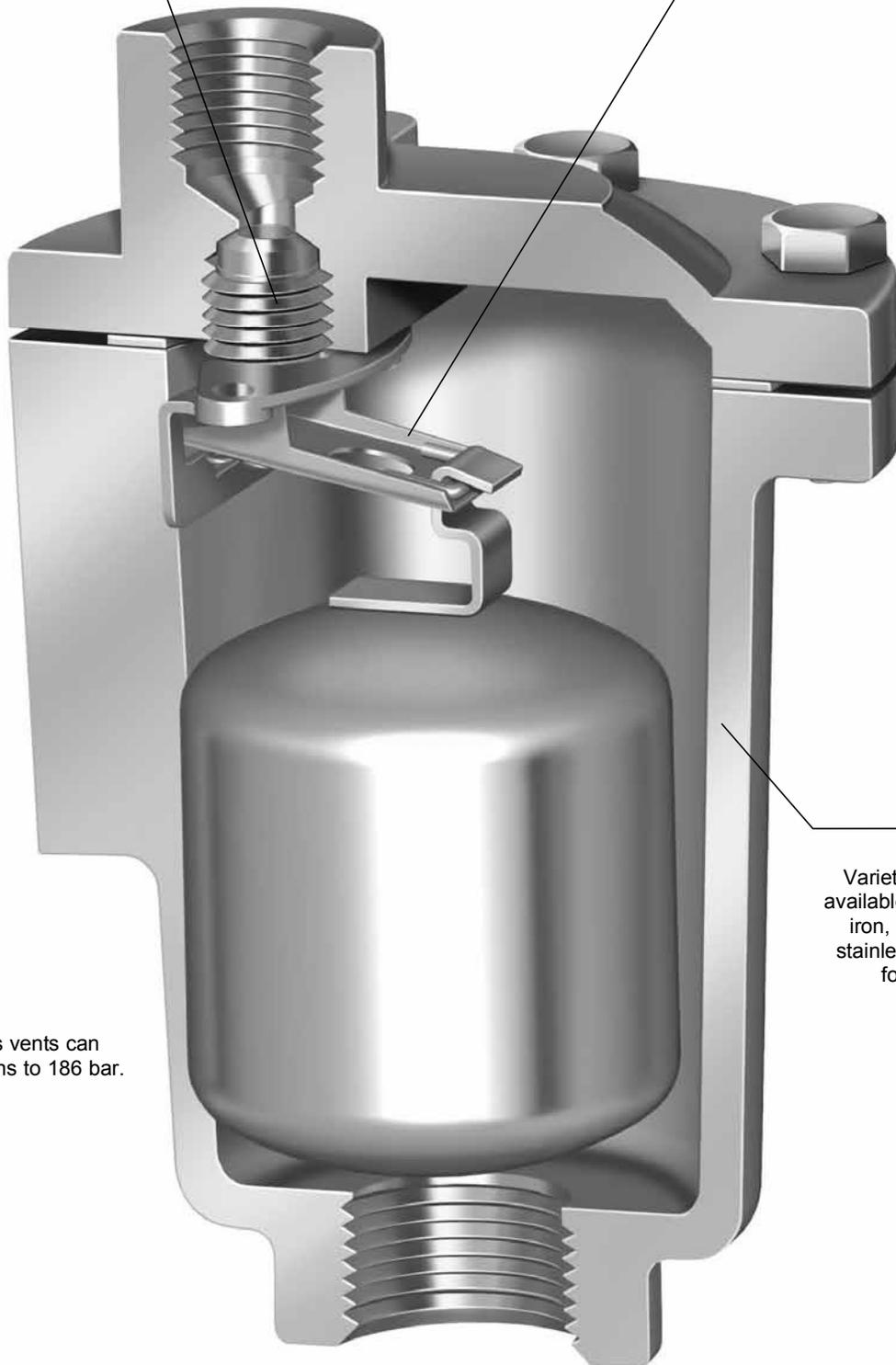


Proven

Same proven, free-floating all stainless steel mechanism as used in Armstrong steam traps.

Leak-tight

Positive closing, free-floating stainless steel lever ensures leak-tight closing under all conditions.



Body options

Variety of body materials available: polysulfone, cast iron, forged steel and all stainless steel. A material for every application.

High pressure

Armstrong air/gas vents can handle applications to 186 bar.



Selecting The Armstrong Air/Gas Vent

With the desired capacity in m³/h known, find the orifice size required from the table on this page. Then find the vent or vents with the correct orifice size on pages AV-338 to AV-347 that will operate at the required pressure with a liquid of the specific gravity being handled.

Example – Find a model number that will vent 88,3 m³/h of air (including safety factor of 1,5 - 2,0) from a liquid with a specific gravity of 0,93 at 17 bar. Using the table below, follow the 17 bar line across to the number 103. Orifice size is 5/32". Now go to pages AV-338 to AV-347 checking the 5/32" orifice lines to locate a vent for 17 bar or higher with 0,90 gravity liquid.

Note: Since specific gravity falls between 0,95 and 0,90, use 0,90 gravity data. The model 3-AV on page AV-340 is the one to use.

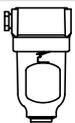
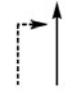
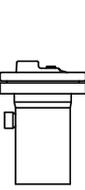
For Venting During Filling Only

If a vent is required only for getting rid of air when a system is started up, such as when starting up a deep well pump or filling an empty pipe, tank or other vessel, ability of the vent to open at operating pressure can be ignored. In these cases, a model number with a large orifice for fast venting may be selected, **but the vent will not open after air is expelled and the system reaches operating pressure.**

| Table AV-335-1. Discharge of Air Through an Orifice in Nm ³ /h at a Standard Atmospheric Pressure of 1 bar(a) and 21°C | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------------|-------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|--------|---------|
| Pressure barg | Orifice Diameter, inch | | | | | | | | | | | | | | | | | | | | | |
| | 1/16" | 5/64" | 3/32" | #38 | 7/64" | 1/8" | 9/64" | 5/32" | 3/16" | 7/32" | 1/4" | 9/32" | 5/16" | 11/32" | 3/8" | 7/16" | 1/2" | 9/16" | 5/8" | 3/4" | 7/8" | 1 1/16" |
| 0,3 | 1,10 | 1,72 | 2,46 | 2,63 | 3,36 | 4,38 | 5,56 | 6,85 | 9,87 | 13,4 | 17,5 | 22,3 | 27,4 | 33,1 | 39,4 | 53,7 | 70,2 | 88,9 | 110 | 158 | 214 | 316 |
| 0,4 | 1,21 | 1,87 | 2,70 | 2,89 | 3,67 | 4,79 | 6,07 | 7,49 | 10,8 | 14,7 | 19,2 | 24,3 | 29,9 | 36,2 | 43,2 | 58,6 | 76,6 | 97,0 | 120 | 173 | 234 | 347 |
| 0,5 | 1,29 | 2,02 | 2,91 | 3,11 | 3,96 | 5,16 | 6,54 | 8,07 | 11,6 | 15,8 | 20,7 | 26,2 | 32,3 | 39,1 | 46,4 | 63,2 | 82,6 | 104 | 129 | 185 | 253 | 374 |
| 0,6 | 1,46 | 2,28 | 3,28 | 3,52 | 4,47 | 5,83 | 7,37 | 9,11 | 13,1 | 17,8 | 23,3 | 29,6 | 36,4 | 44,0 | 52,5 | 71,4 | 93,3 | 118 | 146 | 209 | 285 | 421 |
| 0,8 | 1,67 | 2,62 | 3,75 | 4,03 | 5,11 | 6,68 | 8,46 | 10,4 | 15,0 | 20,4 | 26,7 | 33,8 | 41,8 | 50,5 | 60,1 | 81,9 | 107 | 135 | 167 | 241 | 328 | 483 |
| 1,0 | 1,85 | 2,91 | 4,18 | 4,47 | 5,67 | 7,42 | 9,40 | 11,6 | 16,7 | 22,8 | 29,7 | 37,5 | 46,4 | 56,1 | 66,8 | 90,9 | 119 | 150 | 185 | 267 | 364 | 537 |
| 1,4 | 2,12 | 3,31 | 4,77 | 5,11 | 6,49 | 8,48 | 10,7 | 13,3 | 19,0 | 26,0 | 34,0 | 43,0 | 53,0 | 64,1 | 76,3 | 104 | 136 | 172 | 212 | 306 | 416 | 613 |
| 1,7 | 2,34 | 3,67 | 5,28 | 5,66 | 7,19 | 9,40 | 11,9 | 14,7 | 21,1 | 28,7 | 37,5 | 47,6 | 58,6 | 71,0 | 84,4 | 115 | 150 | 190 | 234 | 338 | 460 | 678 |
| 2,0 | 2,62 | 4,08 | 5,88 | 6,29 | 8,00 | 10,4 | 13,2 | 16,3 | 23,4 | 31,9 | 41,8 | 52,8 | 65,2 | 79,0 | 94,0 | 128 | 167 | 212 | 262 | 375 | 511 | 754 |
| 2,4 | 2,94 | 4,60 | 6,63 | 7,08 | 9,02 | 11,8 | 14,9 | 18,3 | 26,5 | 36,0 | 47,1 | 59,6 | 73,6 | 89,0 | 106 | 144 | 189 | 238 | 294 | 425 | 578 | 851 |
| 2,8 | 3,28 | 5,11 | 7,37 | 7,88 | 10,0 | 13,1 | 16,6 | 20,4 | 29,4 | 40,1 | 52,3 | 66,3 | 81,9 | 99,1 | 118 | 160 | 209 | 265 | 328 | 471 | 642 | 946 |
| 3,1 | 3,60 | 5,62 | 8,10 | 8,66 | 11,0 | 14,4 | 18,2 | 22,4 | 32,5 | 44,2 | 57,6 | 72,9 | 90,0 | 109 | 130 | 177 | 231 | 292 | 360 | 518 | 705 | 1 040 |
| 3,5 | 3,92 | 6,13 | 8,83 | 9,45 | 12,0 | 15,7 | 19,9 | 24,5 | 35,3 | 48,1 | 62,9 | 79,5 | 98,0 | 119 | 141 | 192 | 251 | 318 | 392 | 566 | 770 | 1 133 |
| 4,1 | 4,57 | 7,14 | 10,3 | 11,0 | 14,0 | 18,3 | 23,1 | 28,5 | 41,1 | 55,9 | 73,1 | 92,4 | 114 | 138 | 164 | 224 | 292 | 370 | 457 | 658 | 895 | 1 320 |
| 4,8 | 5,20 | 8,14 | 11,7 | 12,5 | 16,0 | 20,9 | 26,3 | 32,6 | 46,9 | 63,7 | 83,3 | 106 | 130 | 157 | 187 | 255 | 333 | 421 | 520 | 749 | 1 021 | 1 505 |
| 5,5 | 5,84 | 9,12 | 13,2 | 14,1 | 17,8 | 23,4 | 29,6 | 36,5 | 52,7 | 71,5 | 93,4 | 118 | 146 | 177 | 211 | 287 | 374 | 474 | 584 | 841 | 1 145 | 1 689 |
| 6,2 | 6,47 | 10,1 | 14,6 | 15,6 | 19,9 | 26,0 | 32,8 | 40,4 | 58,3 | 79,3 | 104 | 131 | 162 | 195 | 233 | 318 | 415 | 525 | 647 | 933 | 1 269 | 1 872 |
| 7,0 | 7,12 | 11,1 | 16,0 | 17,2 | 21,7 | 28,4 | 36,0 | 44,5 | 64,1 | 87,2 | 114 | 144 | 178 | 216 | 257 | 348 | 455 | 576 | 712 | 1 025 | 1 393 | 2 056 |
| 7,6 | 7,75 | 12,1 | 17,5 | 18,7 | 23,8 | 30,9 | 39,2 | 48,4 | 69,7 | 94,8 | 124 | 157 | 194 | 234 | 279 | 379 | 496 | 627 | 775 | 1 115 | 1 517 | 2 238 |
| 8,5 | 8,68 | 13,6 | 19,5 | 20,9 | 26,7 | 34,8 | 44,0 | 54,4 | 78,2 | 107 | 139 | 177 | 217 | 263 | 313 | 426 | 556 | 703 | 868 | 1 252 | 1 704 | 2 511 |
| 10 | 10,3 | 16,0 | 23,1 | 24,8 | 31,4 | 41,1 | 52,0 | 64,2 | 92,4 | 126 | 164 | 207 | 257 | 311 | 369 | 503 | 658 | 831 | 1 026 | 1 478 | 2 012 | 2 966 |
| 14 | 13,4 | 20,9 | 30,2 | 32,3 | 41,1 | 53,7 | 68,0 | 83,8 | 121 | 164 | 214 | 272 | 335 | 406 | 483 | 658 | 858 | 1 086 | 1 341 | 1 930 | 2 628 | 3 875 |
| 17 | 16,5 | 25,8 | 37,2 | 39,9 | 50,6 | 66,3 | 83,8 | 103 | 149 | 202 | 265 | 335 | 413 | 501 | 596 | 810 | 1 058 | 1 341 | 1 655 | 2 382 | 3 243 | 4 781 |
| 20 | 19,7 | 30,8 | 44,3 | 47,4 | 60,3 | 78,7 | 99,6 | 123 | 177 | 241 | 314 | 399 | 493 | 595 | 708 | 965 | 1 259 | 1 594 | 1 967 | 2 834 | 3 858 | 5 688 |
| 28 | 26,0 | 40,6 | 58,4 | 62,5 | 79,5 | 104 | 131 | 162 | 233 | 318 | 415 | 525 | 649 | 785 | 934 | 1 271 | 1 662 | 2 255 | 2 594 | 3 736 | 5 087 | 7 499 |
| 35 | 32,3 | 50,3 | 72,5 | 77,6 | 98,7 | 129 | 163 | 202 | 291 | 394 | 515 | 652 | 805 | 975 | 1 160 | 1 578 | 2 063 | 2 610 | 3 221 | 4 640 | 6 315 | 9 311 |
| 41 | 38,4 | 60,1 | 86,6 | 92,8 | 118 | 154 | 195 | 241 | 347 | 471 | 615 | 780 | 962 | 1 164 | 1 385 | 1 886 | 2 464 | 3 118 | 3 848 | 5 540 | 7 542 | 11 122 |
| 52 | 47,9 | 74,8 | 108 | 115 | 147 | 192 | 243 | 299 | 432 | 586 | 766 | 970 | 1 196 | 1 448 | 1 723 | 2 346 | 3 063 | 3 879 | 4 788 | 6 895 | 9 384 | 13 837 |
| 69 | 63,5 | 99,2 | 143 | 153 | 195 | 255 | 321 | 398 | 573 | 778 | 1 016 | 1 286 | 1 589 | 1 992 | 2 287 | 3 113 | 4 066 | 5 146 | 6 354 | 9 149 | 12 452 | 18 361 |

Air Vents

Table AV-336-1. Armstrong Air Vents

| Illustration | Type | Flow Direction | Connection Type | Max. Allow. Press. barg | TMA °C | Body Material | Model | Max. Oper. Press. barg | Connection Size | | | | | | | Located on Page | |
|---|---|---|---|--|--|---|--|------------------------|-----------------|------|--------|---------|----|--------|----------------------|-----------------|--------|
| | | | | | | | | | 1/8" | 1/4" | 1/2" | 3/4" | 1" | 1 1/2" | 2" | | |
|  | Series 1-AVCW See-thru Free Floating Lever Air Vents for Ozone Applications |  | Screwed | 10 | 66 | PBT Cap (Polybutylene Terephthalate) Polysulfone Body | 1-AVCW | 10 | | | ▲ | ★★ | | | | | AV-352 |
|  | Series 1-AVC See-Thru Free Floating Lever Air/Gas Vents |  | Screwed | 10 | 66 | Nylon Cap Polysulfone Body | 1-AVC | 10 | | | ● | ★★ | | | | | AV-338 |
|  | Series 21-AR Fixed Pivot Ball Float Air/Gas Vents |  | Screwed | 17 | 232 | ASTM A48 Class 30 Cast Iron | 21-AR | 17 | | | ● | ● | | | | | AV-339 |
|  | Series 21-312 Fixed Pivot Ball Float Air/Gas Vents |  | Screwed Socketweld Flanged ††† | 41 or 34 | 38 or 399 | ASTM A105 Forged Steel | 21-312AR 21-312VAR | 4,5 41 | | | ● | ● | | | | | AV-339 |
|  | Series 1, 2, 3, 6 Free Floating Lever Air/Gas Vents |  | Screwed Flanged ††† | 21 17 | 93 232 | ASTM A48 Class 30 Cast Iron | 1-AV † 2-AV 3-AV 6-AV | 21 17 | | | ★ ● | ★ ● | | ● | | ● | AV-340 |
|  | Series 30 Free Floating Lever Air/Gas Vents |  | Screwed Socketweld Flanged ††† | 41 or 34 69 or 41 | 38 or 399 38 or 399 | ASTM A105 Forged Steel | 32-AV 33-AV 36-AV | 41 62 69 | | | ● | ● | ● | | | ● | AV-342 |
|  | Series 10 Free Floating Lever Air/Gas Vents |  | Screwed Socketweld (22 and 13 only) Flanged ††† | 34 or 30 38 or 33 39 or 34 | 38 or 260 38 or 260 238 or 260 | 304-L Stainless Steel | 11-AV †† 22-AV 13-AV | 28 38 39 | | | ● | ★★ ● | | | | | AV-346 |
|  | Series HLAR High Leverage Air/Gas Vents |  | Screwed Socketweld Flanged ††† | 69 or 41 | 38 or 399 | ASTM A105 Forged Steel | 2313 HLAR 2315 HLAR 2316 HLAR | 69 | | | ● | ● | ● | | 1 1/4" ● 1 1/2" ● | ● | AV-344 |
|  | Series HLAR High Leverage Air/Gas Vents |  | Screwed Socketweld Flanged ††† | 103 or 62 125 or 62 | 38 or 454 38 or 482 | ASTM A182 Gr. F22 Forged Steel | 2413 HLAR 2415 HLAR 2416 HLAR | 103 124 103 | | | ● | ● | ● | | 1 1/4" ● 1 1/2" ● | ● | AV-344 |

★ 1/4" outlet connection ★★ 1/2" outlet connection † Side connection available ▲ Alternate inlet 1/2"
 †† Side connection not available ††† Flange selection may limit pressure and temperature rating.

Air Vent ID Charts



| Table AV-337-1. Armstrong Air Vents | | | | | | | | | | | | | | | | |
|-------------------------------------|---|----------------|--------------------------------------|-------------------------|-----------------|--------------------------------------|-----------------|------------------------|-----------------|------|------|------|----|--------|--------|-----------------|
| Illustration | Type | Flow Direction | Connection Type | Max. Allow. Press. barg | TMA °C | Body Material | Model | Max. Oper. Press. barg | Connection Size | | | | | | | Located on Page |
| | | | | | | | | | 1/8" | 1/4" | 1/2" | 3/4" | 1" | 1 1/2" | 2" | |
| | Series HLAR High Leverage Air/Gas Vents | | Screwed Socketweld Flanged ††† | 146 | 38 | ASTM A182 Gr. F22 Forged Steel | 25133G- HLAR | 146 | | | • | • | • | | | AV-344 |
| | | | | 117 | 482 | | 25155G- HLAR | 172 | | | | • | • | • | | |
| | | | | 174 or 138 | 38 or 482 | | 26155G- HLAR | 186 | | | | | | • | • | |
| | Series TTF Thermostatic Air Vents | | Straight-Thru Right Angle | 20 | 232 | 304-L Stainless Steel | TTF-1 | 21 | | | • | • | | | AV-348 | |
| | | | | | | | TTF-1R | | | | | | | | | |
| | TAVB Thermostatic Bellows with Integral Vacuum Breaker | | Straight-Thru Screwed | 20 | 232 | 304L Stainless Steel | TAVB-2 | 10 | | | • | | | | AV-349 | |
| | | | | | | | TAVB-3 | | | | | • | | | | |
| | Series TV-2 Thermostatic Air Vents | | Screwed | 9 | 177 | ASTM B62 Cast Bronze | TV-2 | 8,5 | | | • | | | | AV-351 | |
| | Series TS-2 Thermostatic Air Vents | | Threaded | 3,5 | 149 | ASTM B62 Bronze | TS-2 | 3,5 | | | • | • | | | AV-350 | |
| | AV-11, AV-13 Hydronic System Air Vents | | Screwed | 3,5 10 | 99 | Brass | AV-11 AV-13 | 3,5 10 | • | | • | • | | | AV-353 | |

★ 1/4" outlet connection ★★ 1/2" outlet connection † Side connection available ▲ Alternate inlet 1/2"
 †† Side connection not available ††† Flange selection may limit pressure and temperature rating.
 All models comply with the Pressure Equipment Directive PED 97/23/EC. For details, see specific product page or Armstrong PED Certificate.

Air Vents