

ART 645

Gunmetal High Discharge Safety Valve



Features

- Screwed BSP Parallel (ISO 228/1)
- Suitable for gases and liquids
- Fitted with diaphragm to protect spring housing
- Set range 0.5 to 16 Bar
- ISO 4126-1, PED 2014/68/EU
- Marine approvals - GL, DNV
- ATEX approval available at extra cost
- 5 year warranty
- Test certificate to EN10204-3.1 available on request
- High capacity discharge

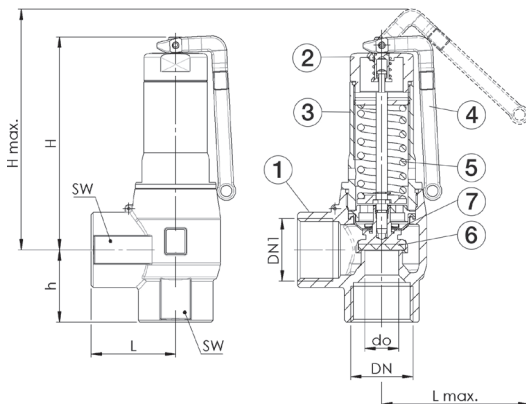


Technical data

Max pressure: 16 Bar

Working temp: EPDM Diaphragm
-50°C to 195°C

See overleaf for discharge capacity.



| DN | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
|------|------|------|--------|--------|--------|--------|
| DN1 | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" |
| L | 36 | 43 | 47 | 58 | 68 | 80 |
| Lmax | 63 | 78 | 100 | 140 | 150 | 155 |
| H | 90 | 115 | 146 | 192 | 229 | 275 |
| Hmax | 102 | 133 | 148 | 210 | 252 | 298 |
| h | 30 | 35 | 37 | 45 | 55 | 65 |
| SW1 | 27 | 34 | 41 | 55 | 65 | 80 |
| SW2 | 34 | 41 | 50 | 60 | 70 | 90 |
| do | 13 | 18 | 23 | 30 | 39 | 48 |
| Kgs | 0.5 | 0.9 | 1.6 | 3.3 | 5.8 | 8.9 |

| N. | Part Name | Materials |
|----|----------------|-------------------------|
| 1 | Body | Gunmetal |
| 2 | Housing Cap | Brass CC499K / Gunmetal |
| 3 | Spring Housing | Brass CC499K / Gunmetal |
| 4 | Lifting Lever | Stainless Steel CF8M |
| 5 | Spring | Stainless Steel 302 |
| 6 | Seat - Seal | PTFE |
| 7 | Diaphragm | EPDM |

Typical Applications

- Pressure vessels
- Mechanical engineering
- Pump protection
- Pressure booster systems water / air-side
- Cooling / chilling systems
- Steam and industrial boiler systems

ART 645

Nm³/h - Air
Kg/h - Steam
M³/h - Water
Kw - Heating Water



Discharging Capacities

Blowing off rates at 10% above set pressure

| DN | 1/2" | | | | 3/4" | | | | 1" | | | |
|-----|--------------------|------|-------------------|-----|--------------------|------|-------------------|-----|--------------------|------|-------------------|------|
| Bar | Nm ³ /h | kg/h | m ³ /h | kW | Nm ³ /h | kg/h | m ³ /h | kW | Nm ³ /h | kg/h | m ³ /h | kW |
| 0.5 | 76 | 62 | 2.3 | 38 | 143 | 117 | 4.3 | 72 | 234 | 191 | 7.0 | 118 |
| 1 | 110 | 88 | 3.2 | 54 | 207 | 165 | 5.8 | 101 | 338 | 269 | 9.5 | 164 |
| 2 | 180 | 142 | 4.5 | 85 | 340 | 268 | 8.2 | 160 | 556 | 437 | 13.5 | 262 |
| 3 | 248 | 193 | 5.5 | 114 | 468 | 365 | 10.1 | 215 | 764 | 595 | 16.5 | 352 |
| 4 | 312 | 242 | 6.4 | 141 | 592 | 458 | 11.7 | 267 | 966 | 748 | 19.1 | 436 |
| 5 | 376 | 290 | 7.1 | 167 | 712 | 549 | 13.1 | 316 | 1163 | 896 | 21.3 | 517 |
| 6 | 440 | 337 | 7.8 | 193 | 833 | 639 | 14.3 | 365 | 1359 | 1043 | 23.4 | 595 |
| 7 | 503 | 385 | 8.4 | 218 | 953 | 729 | 15.5 | 412 | 1556 | 1190 | 25.2 | 673 |
| 8 | 567 | 432 | 9.0 | 242 | 1074 | 819 | 16.5 | 459 | 1753 | 1337 | 27.0 | 749 |
| 9 | 631 | 480 | 9.6 | 267 | 1194 | 908 | 17.5 | 505 | 1950 | 1483 | 28.6 | 825 |
| 10 | 694 | 527 | 10.1 | 291 | 1315 | 998 | 18.5 | 550 | 2147 | 1629 | 30.2 | 899 |
| 11 | 758 | 574 | 10.6 | 315 | 1435 | 1088 | 19.4 | 595 | 2343 | 1776 | 31.7 | 972 |
| 12 | 822 | 622 | 11.1 | 338 | 1556 | 1177 | 20.2 | 640 | 2540 | 1922 | 33.1 | 1045 |
| 13 | 885 | 669 | 11.5 | 361 | 1676 | 1266 | 21.1 | 684 | 2737 | 2068 | 34.4 | 1116 |
| 14 | 949 | 716 | 11.9 | 384 | 1797 | 1356 | 21.9 | 727 | 2934 | 2214 | 35.7 | 1187 |
| 15 | 1013 | 764 | 12.4 | 407 | 1917 | 1446 | 22.6 | 770 | 3130 | 2361 | 37.0 | 1257 |
| 16 | 1076 | 811 | 12.8 | 429 | 2038 | 1535 | 23.4 | 813 | 3327 | 2507 | 38.2 | 1327 |

| DN | 1 1/4" | | | | 1 1/2" | | | | 2" | | | |
|-----|--------------------|------|-------------------|------|--------------------|------|-------------------|------|--------------------|------|-------------------|------|
| Bar | Nm ³ /h | kg/h | m ³ /h | kW | Nm ³ /h | kg/h | m ³ /h | kW | Nm ³ /h | kg/h | m ³ /h | kW |
| 0.5 | 338 | 276 | 10.5 | 170 | 571 | 466 | 17.7 | 288 | 864 | 706 | 26.8 | 436 |
| 1 | 491 | 392 | 14.3 | 239 | 831 | 662 | 24.1 | 404 | 1258 | 1003 | 36.5 | 612 |
| 2 | 816 | 642 | 20.2 | 385 | 1379 | 1085 | 34.2 | 650 | 2089 | 1643 | 51.8 | 985 |
| 3 | 1128 | 879 | 24.8 | 520 | 1907 | 1486 | 41.9 | 878 | 2888 | 2251 | 63.5 | 1330 |
| 4 | 1430 | 1107 | 28.7 | 646 | 2417 | 1872 | 48.4 | 1092 | 3661 | 2835 | 73.4 | 1654 |
| 5 | 1721 | 1326 | 32.1 | 765 | 2909 | 2241 | 54.2 | 1293 | 4407 | 3395 | 82.1 | 1958 |
| 6 | 2013 | 1544 | 35.1 | 882 | 3402 | 2609 | 59.4 | 1490 | 5153 | 3953 | 89.9 | 2257 |
| 7 | 2304 | 1762 | 37.9 | 996 | 3894 | 2977 | 64.1 | 1684 | 5899 | 4510 | 97.1 | 2551 |
| 8 | 2595 | 1979 | 40.6 | 1109 | 4386 | 3344 | 68.6 | 1875 | 6644 | 5066 | 103.9 | 2840 |
| 9 | 2887 | 2196 | 43.0 | 1221 | 4879 | 3711 | 72.7 | 2063 | 7390 | 5621 | 110.2 | 3125 |
| 10 | 3178 | 2412 | 45.4 | 1331 | 5371 | 4077 | 76.7 | 2249 | 8136 | 6175 | 116.1 | 3407 |
| 11 | 3469 | 2629 | 47.6 | 1439 | 5863 | 4443 | 80.4 | 2433 | 8882 | 6730 | 121.8 | 3685 |
| 12 | 3761 | 2845 | 49.7 | 1547 | 6356 | 4809 | 84.0 | 2614 | 9627 | 7284 | 127.2 | 3959 |
| 13 | 4052 | 3061 | 51.7 | 1652 | 6848 | 5174 | 87.4 | 2793 | 10373 | 7837 | 132.4 | 4230 |
| 14 | 4343 | 3278 | 53.7 | 1758 | 7340 | 5541 | 90.7 | 2970 | 11119 | 8393 | 137.4 | 4500 |
| 15 | 4635 | 3495 | 55.6 | 1862 | 7833 | 5907 | 93.9 | 3146 | 11865 | 8948 | 142.3 | 4766 |
| 16 | 4926 | 3711 | 57.4 | 1964 | 8325 | 6272 | 97.0 | 3319 | 12611 | 9501 | 146.9 | 5028 |

Seat-Seal/Diaphragm Options

| Option | Materials | Type | Working Temp. |
|-----------|--|--|-----------------|
| PTFE/EPDM | Polytetrafluorethylen/Ethylen-Propylene-Diene (Standard) | Flat seal and moulded diaphragm | -50°C to +195°C |
| EPDM/EPDM | Ethylen-Propylene-Diene/Ethylen-Propylene-Diene | Flat seal and moulded diaphragm | -50°C to +150°C |
| PTFE/FKM | Polytetrafluorethylen/Fluorcarbon | Flat seal and moulded diaphragm | -30°C to +200°C |
| FKM/FKM | Fluorcarbon/Fluorcarbon | Elastomere seals and moulded diaphragm | -20°C to +200°C |

V2. Dimensions in mm

This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.

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