

Safety Valves

Type 06850, Type 06855 - Sealing plate



Safety Valves, angle type, stainless steel, type tested, TÜV-SV.1130. G/L

standard safety valve
 with soft valve seal, "cleaned and degreased"
 closed bonnet, gastight cap or lifting device
 Inlet: male thread type G (BSPP) acc. to ISO 228/1
 Outlet: female thread type G (BSPP) acc. to ISO 228/1

Part No. 06850.X.000001L (Pmax 150.0 bar)
 with gastight cap

Part No. 06855.X.000001L (Pmax 150.0 bar)
 with lifting device

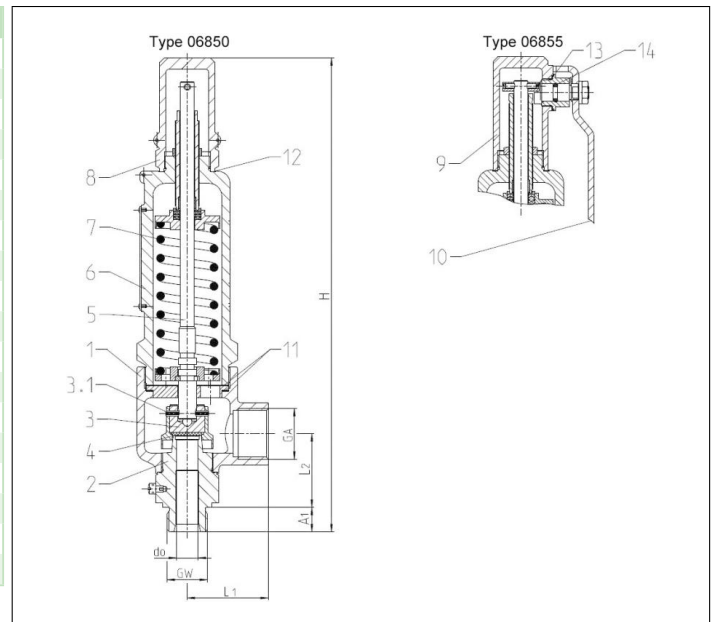
Available options - on request only:
 · Flange-, NPT- or Tri-Clamp connection for in- and outlet



Applications:

Provided as safety device for protection against excessive pressure in gas cylinders and pressure vessels.
 Approved for gases and liquids. Working temperature: -270°C / -454°F (3K) up to +300°C / +572°F (573K)
 Pressure-temperature must be observed, suitable for horizontal installation from 20 bar

| Materials | DIN EN | ASME/ASTM |
|--------------------|-----------------|-------------------|
| 1 Outlet body | 1.4408 | A 351 CF8M |
| 2 Inlet body | 1.4571 | A 276 Grade 316Ti |
| 3 Disc | 1.4571 | A 276 Grade 316Ti |
| 4 Sealing plate | VESPEL | |
| 5 Stem | 1.4404 | A 276 Grade 316L |
| 6 Bonnet | 1.4408 | A 351 CF8M |
| 7 Spring | 1.4571 | A 313 Grade 316Ti |
| 8 Cap | 1.4408 | A 351 CF8M |
| 9 Lifting cap | 1.4408 | A 351 CF8M |
| 10 Lever | 1.4301 | A 276 Grade 304 |
| Spare Parts | | |
| 2 Inlet body | 1.4571 | 316Ti |
| 3.1 Split pin | 1.4571 | 316Ti |
| 4 Sealing plate | VESPEL | |
| 11 Gasket | 1.4404 Graphite | 316L Graphite |
| 12 Gasket | PTFE | |
| 13 Gasket | PTFE | |
| 14 O-ring | FPM (VITON) | |



| Typ 06850, 06855 | Technical data | | | | | | | | | | |
|--------------------------|----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Orifice | [mm] | 10 | | | 14 | | | | | |
| Inlet | GW | | 1/2 | 3/4 | 1 | 3/4 | 3/4 | 3/4 | 1 | 1 | 1 |
| Outlet | GW | | 1 | 1 | 1 | 1 | 1-1/4 | 1-1/2 | 1 | 1-1/4 | 1-1/2 |
| Dimension code | .X. | | 1024 | 1034 | 1044 | 1434 | 1435 | 1436 | 1444 | 1445 | 1446 |
| Height | H | | 305.0 | 307.0 | 309.0 | 310.5 | 310.5 | 310.5 | 312.5 | 312.5 | 312.5 |
| Length | L1 | | 53.0 | 53.0 | 53.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 |
| Length | L2 | | 44.5 | 44.5 | 44.5 | 48.2 | 48.2 | 48.2 | 48.2 | 48.2 | 48.2 |
| Length | A1 | | 14.0 | 16.0 | 18.0 | 16.0 | 16.0 | 16.0 | 18.0 | 18.0 | 18.0 |
| Weight 06850 | ca. kg | | 3.2 | 3.2 | 3.2 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| Weight 06855 | ca. kg | | 3.4 | 3.4 | 3.4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| Coefficient of discharge | $\alpha_w S/G$ | | 0.84 | 0.84 | 0.84 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Coefficient of discharge | $\alpha_w L$ | | 0.68 | 0.68 | 0.68 | * | * | * | * | * | * |
| Min. set pressure | bar-g | | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Max. set pressure | bar-g | | 150.0 | 150.0 | 150.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 |
| Min. temperature | °C | | -270 | -270 | -270 | -270 | -270 | -270 | -270 | -270 | -270 |
| Max. temperature | °C | | +300 | +300 | +300 | +300 | +300 | +300 | +300 | +300 | +300 |

Dimensions in mm. * 0.20-11.50 bar=0.50 / 11.51-74.99 bar=0.49 / 75.00-120.00 bar=0.46

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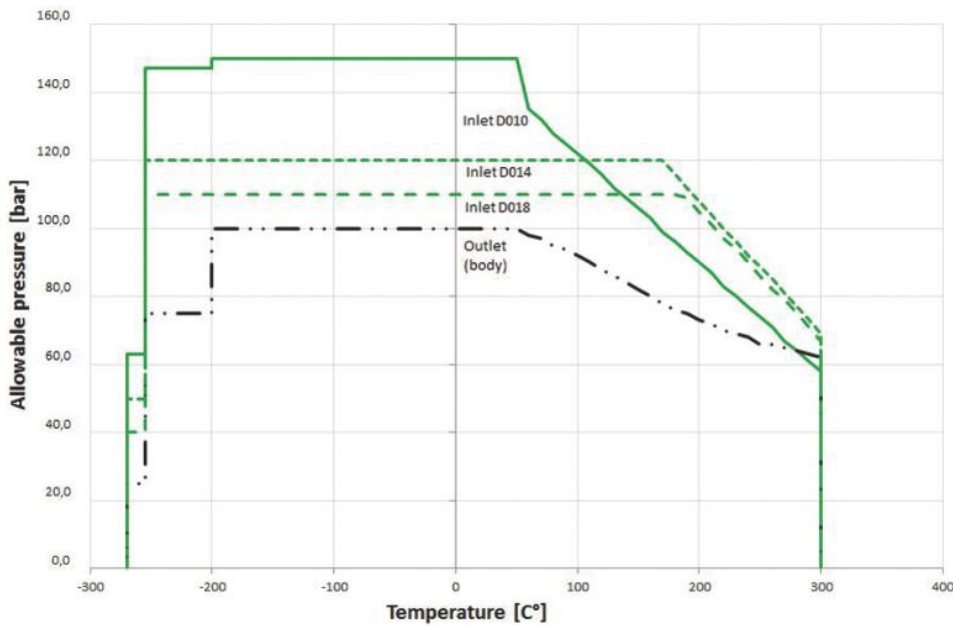


| Type 06850, 06855 | | Technical data | | | | | |
|--------------------------|-----------------|----------------|-------|-------|-------|-------|-------|
| Orifice | [mm] | 18 | | | | | |
| Inlet | GW | 1 | 1 | 1-1/4 | 1-1/4 | 1-1/2 | 1-1/2 |
| Outlet | GW | 1-1/2 | 2 | 1-1/2 | 2 | 1-1/2 | 2 |
| Dimension code | .X. | 1846 | 1847 | 1856 | 1857 | 1866 | 1867 |
| Height | H | 304.0 | 304.0 | 304.0 | 304.0 | 306.0 | 306.0 |
| Length | L1 | 60.0 | 63.0 | 60.0 | 63.0 | 60.0 | 63.0 |
| Length | L2 | 49.0 | 53.0 | 49.0 | 53.0 | 49.0 | 53.0 |
| Length | A1 | 18.0 | 18.0 | 20.0 | 20.0 | 22.0 | 22.0 |
| Weight 06850 | ca. kg | 3.9 | 4.1 | 3.9 | 4.1 | 4.0 | 4.2 |
| Weight 06855 | ca. kg | 4.1 | 4.3 | 4.1 | 4.3 | 4.2 | 4.4 |
| Coefficient of discharge | $\alpha_{wS/G}$ | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Coefficient of discharge | α_{wL} | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Min. set pressure | bar-g | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Max. set pressure | bar-g | 110.0 | 110.0 | 110.0 | 110.0 | 110.0 | 110.0 |
| Min. temperature | °C | -270 | -270 | -270 | -270 | -270 | -270 |
| Max. temperature | °C | +300 | +300 | +300 | +300 | +300 | +300 |

Dimensions in mm.

Pressure-Temperature Rating

Maximum allowable set pressure safety valve Type 0685X



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Discharge capacities

Calculation of flow rate acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1

Medium:

A = Saturated steam in kg/h*

B = Air in m³/h at 0°C and 1013,25 mbar

C = Water in kg/h at 20°C

The capacity indicated below is for a fully opened valve.

d_0 - orifice

A_0 - flow area

| Set pressure in bar (g) | GW | 1/2, 3/4 & 1 | | | 3/4 & 1 | | | 1, 1-1/4 & 1-1/2 | | |
|-------------------------|--------------------------|--------------|-------|---|---------|-------|---|------------------|-------|---|
| | d_0 (mm) | 10.0 | | | 14.0 | | | 18.0 | | |
| | A_0 (mm ²) | 78.5 | | | 153.94 | | | 254.0 | | |
| | Medium | A | B | C | A | B | C | A | B | C |
| 0.5 | - | 56 | 2075 | - | 96 | 3035 | - | 152 | 5018 | |
| 1.0 | - | 88 | 2852 | - | 146 | 4110 | - | 242 | 6794 | |
| 2.0 | - | 143 | 4033 | - | 236 | 5813 | - | 407 | 9608 | |
| 3.0 | - | 194 | 4940 | - | 317 | 7119 | - | 570 | 11768 | |
| 4.0 | - | 244 | 5704 | - | 398 | 8220 | - | 715 | 13588 | |
| 5.0 | - | 294 | 6377 | - | 480 | 9190 | - | 862 | 15192 | |
| 6.0 | - | 344 | 6986 | - | 561 | 10068 | - | 1007 | 16642 | |
| 7.0 | - | 393 | 7545 | - | 642 | 10874 | - | 1153 | 17976 | |
| 8.0 | - | 444 | 8066 | - | 726 | 11625 | - | 1302 | 19217 | |
| 9.0 | - | 494 | 8556 | - | 807 | 12330 | - | 1448 | 20383 | |
| 10.0 | - | 545 | 9018 | - | 890 | 12997 | - | 1598 | 21485 | |
| 15.0 | - | 794 | 11045 | - | 1297 | 15590 | - | 2328 | 26298 | |
| 20.0 | - | 1054 | 12754 | - | 1721 | 18013 | - | 3089 | 30385 | |
| 30.0 | - | 1572 | 15620 | - | 2568 | 22062 | - | 4609 | 37213 | |
| 40.0 | - | 2099 | 18037 | - | 3428 | 25475 | - | 6152 | 42970 | |
| 45.0 | - | 2355 | 19131 | - | 3847 | 27020 | - | 6904 | 45577 | |
| 50.0 | - | 2634 | 20166 | - | 4302 | 28481 | - | 7720 | - | |
| 60.0 | - | 3175 | 22091 | - | 5186 | - | - | 9308 | - | |
| 65.0 | - | 3436 | 22993 | - | 5612 | - | - | 10072 | - | |
| 70.0 | - | 3723 | - | - | 6081 | - | - | 10914 | - | |
| 80.0 | - | 4277 | - | - | 6985 | - | - | 12537 | - | |
| 90.0 | - | 4835 | - | - | 7898 | - | - | 14174 | - | |
| 100.0 | - | 5397 | - | - | 8814 | - | - | 15820 | - | |
| 110.0 | - | 5931 | - | - | 9688 | - | - | 17387 | - | |
| 120.0 | - | 6513 | - | - | 10637 | - | - | - | - | |
| 140.0 | - | 7642 | - | - | - | - | - | - | - | |
| 150.0 | - | 8184 | - | - | - | - | - | - | - | |

*not suitable for water steam!