

Safety Valves

Type 06850, Type 06855 - O-ring



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

standard safety valve
 with O-ring 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.000002N | Orifice | 10 | 14 | 18 |
| Part No. 06855.X.000002N | Pmin | 3.0 bar | 3.0 bar | 3.0 bar |
| with NBR O-ring valve seal | Pmax | 15.9 bar | 14.9 bar | 19.9 bar |
| Part No. 06850.X.000002F | Orifice | 10 | 14 | 18 |
| Part No. 06855.X.000002F | Pmin | 16.0 bar | 15.0 bar | 20.0 bar |
| with FKM O-ring valve seal | Pmax | 250.0 bar | 200.0 bar | 110.0 bar |

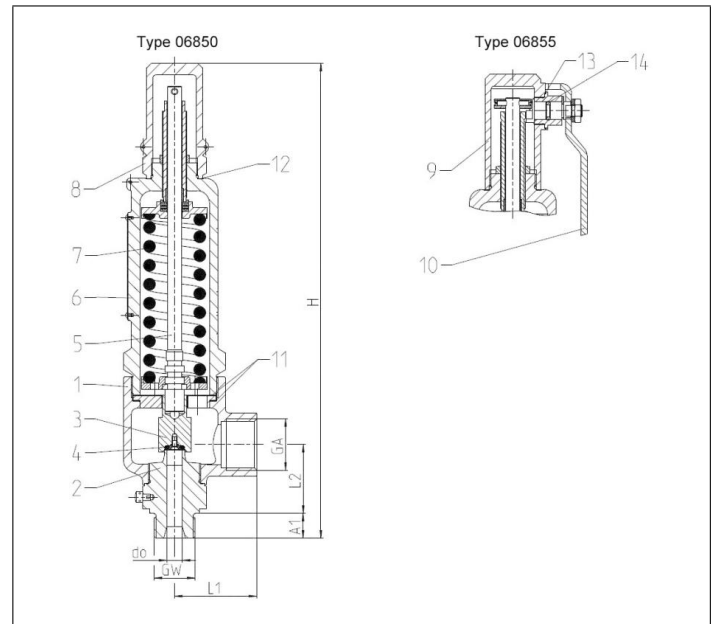
Available options - on request only:
 · Flange-, NPT- or Tri-Clamp connection for in- and outlet



Applications:

Provided as safety device for protection against excessive pressure in gas cylinders and pressure vessels. Approved for gases and liquids. Working temperature: 0°C / 32°F (273K) up to 70°C / 158°F (343K), 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 O-ring | NBR or FKM | |
| 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 | | |
| 3 Complete disc | 1.4571+NBR or FKM | 316Ti + NBR or FKM |
| 4 O-ring + screw | NBR or FKM | |
| 11 Gasket | 1.4404 Graphite | 316L Graphite |
| 12 Gasket | PTFE | |
| 13 Gasket | PTFE | |
| 14 O-ring | FPM (VITON) | |



Standard marking acc. to Pressure Equipment Directive 2014/68/EU (PED).



| Typ 06850, 06855 | Technical data | Orifice | | | | | | | | |
|--------------------------|----------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | [mm] | 10 | | | 14 | | | 18 | |
| 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 | α_w S/G | 0.84 | 0.84 | 0.84 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Coefficient of discharge | α_w L | 0.61 | 0.61 | 0.61 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Min. set pressure | bar-g | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Max. set pressure | bar-g | 250.0 | 250.0 | 250.0 | 200.0 | 200.0 | 200.0 | 200.0 | 200.0 | 200.0 |

Dimensions in mm.

Safety Valves

Type 06850, Type 06855 - O-ring



| 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 | $\alpha_w S/G$ | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Coefficient of discharge | $\alpha_w L$ | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| Min. set pressure | bar-g | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Max. set pressure | bar-g | 110.0 | 110.0 | 110.0 | 110.0 | 110.0 | 110.0 |

Dimensions in mm.

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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.

d₀ - orifice

A₀ - 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 |
| 3.0 | - | 194 | 4431 | - | 317 | 7688 | - | 570 | 12003 | |
| 4.0 | - | 244 | 5117 | - | 398 | 8878 | - | 715 | 13860 | |
| 5.0 | - | 294 | 5721 | - | 480 | 9926 | - | 862 | 15496 | |
| 6.0 | - | 344 | 6267 | - | 561 | 10873 | - | 1007 | 16975 | |
| 7.0 | - | 393 | 6769 | - | 642 | 11744 | - | 1153 | 18335 | |
| 8.0 | - | 444 | 7236 | - | 726 | 12555 | - | 1302 | 19601 | |
| 9.0 | - | 494 | 7675 | - | 807 | 13317 | - | 1448 | 20790 | |
| 10.0 | - | 545 | 8090 | - | 890 | 14037 | - | 1598 | 21915 | |
| 15.0 | - | 794 | 9908 | - | 1298 | 17192 | - | 2329 | 26840 | |
| 20.0 | - | 1054 | 11441 | - | 1721 | 19851 | - | 3089 | 30992 | |
| 30.0 | - | 1572 | 14012 | - | 2568 | 24313 | - | 4609 | 37958 | |
| 40.0 | - | 2099 | 16180 | - | 3428 | 28074 | - | 6152 | 43830 | |
| 50.0 | - | 2634 | 18090 | - | 4302 | 31388 | - | 7720 | 49003 | |
| 60.0 | - | 3175 | 19817 | - | 5186 | 34384 | - | 9308 | 53680 | |
| 70.0 | - | 3723 | 21404 | - | 6081 | 37138 | - | 10914 | 57981 | |
| 80.0 | - | 4277 | 22882 | - | 6985 | 39703 | - | 12537 | 61985 | |
| 90.0 | - | 4835 | 24270 | - | 7898 | 42111 | - | 14174 | 65745 | |
| 100.0 | - | 5397 | 25583 | - | 8814 | 44389 | - | 15820 | 69301 | |
| 110.0 | - | 5931 | 26832 | - | 9688 | 46555 | - | 17387 | 72684 | |
| 120.0 | - | 6513 | 28025 | - | 10637 | 48626 | - | - | - | |
| 140.0 | - | 7642 | 30270 | - | 12482 | 52522 | - | - | - | |
| 150.0 | - | 8184 | 31333 | - | 13368 | 54365 | - | - | - | |
| 160.0 | - | 8758 | 32360 | - | 14305 | 56148 | - | - | - | |
| 180.0 | - | 9847 | 34323 | - | 16083 | 59554 | - | - | - | |
| 200.0 | - | 10898 | 36180 | - | 17801 | 62775 | - | - | - | |
| 220.0 | - | 11931 | 37946 | - | - | - | - | - | - | |
| 240.0 | - | 12983 | 39633 | - | - | - | - | - | - | |
| 250.0 | - | 13522 | 40451 | - | - | - | - | - | - | |