

# Safety Valves

## Type 06380



### Safety Valves, angle type, bronze, type tested TÜV-SV.749. S/G

Standard safety valve

with soft valve seal, open bonnet, with lifting device

In- and outlet: female thread type G (BSPP) acc. to ISO 228/1

#### Part No. 06380.X.0000

with FPM valve seal for air and similar gases

Working temperature: -10°C / +14°F (263K) up to +185°C / +365°F (458K)

#### Part No. 06380.X.0300

with PTFE valve seal for air and similar gases

and saturated steam from 2.0 up to 10.0 bar.

Working temperature: -10°C / +14°F (263K) up to +185°C / +365°F (458K)

#### Part No. 06380.X.0600

with EPDM valve seal for air and similar gases

and steam from 0.2 up to 8 bar. (saturated steam only up to 3.7 bar)

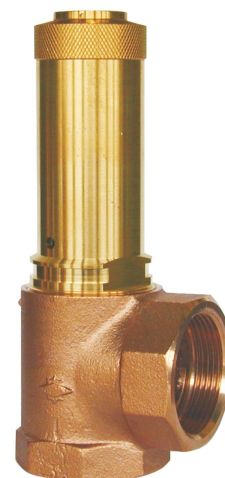
Working temperature: -10°C / +14°F (263K) up to +150°C / +302°F (423K)

Available options - on request only:

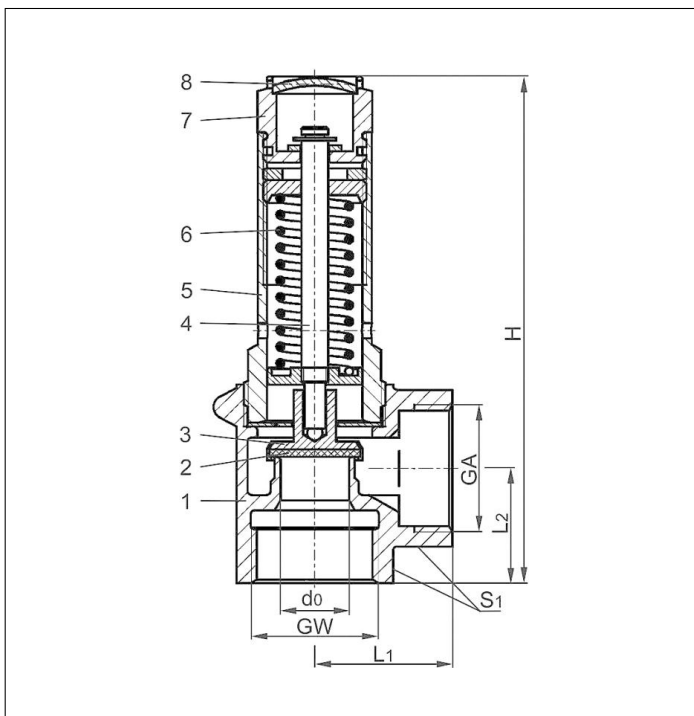
- stainless steel spring - material 1.4571, external parts nickel plated

### Applications:

Provided as safety device for protection against excessive pressure in gas cylinders and pressure vessels.



| Materials        | DIN EN            | ASME/ASTM        |
|------------------|-------------------|------------------|
| 1 Body           | CC491K            | B 62 UNS C83600  |
| 2 Valve seal     | FPM, PTFE or EPDM |                  |
| 3 Disc           | CW614N            | B 249 UNS C38500 |
| 4 Stem           | CW614N            | B 249 UNS C38500 |
| 5 Bonnet         | CW614N            | B 249 UNS C38500 |
| 6 Spring         | 1.1200            | A 227            |
| 7 Lifting device | CW614N            | B 249 UNS C38500 |
| 8 Closing cap    | CW507L            | B 36 UNS C26800  |



| Type 06380                       | Technical data |        |        |        |        |        |        |
|----------------------------------|----------------|--------|--------|--------|--------|--------|--------|
| Nominal size                     | GW             | 1/2    | 3/4    | 1      | 1-1/4  | 1-1/2  | 2      |
| Orifice                          | d <sub>0</sub> | 12     | 15     | 18     | 20     | 24     | 28     |
| Dimension code                   | .X.            | 0400   | 0600   | 1000   | 1200   | 1400   | 2000   |
| Set pressure range FPM seal      | bar            | 0.2-20 | 0.2-20 | 0.2-20 | 0.2-20 | 0.2-16 | 0.2-16 |
| Set pressure range PTFE seal     | bar            | 0.2-20 | 0.5-20 | 0.2-20 | 0.4-20 | 0.2-16 | 1.0-16 |
| Set pressure range EPDM seal     | bar            | 0.2-8  | 0.2-8  | 0.2-9  | 0.2-9  | 0.2-8  | 0.2-8  |
| Outlet                           | GA             | 1/2    | 3/4    | 1      | 1-1/4  | 1-1/2  | 2      |
| Height                           | H              | 99     | 111    | 132    | 152    | 175    | 200    |
| Length                           | L <sub>1</sub> | 25     | 30     | 36     | 40     | 48     | 56     |
| Length                           | L <sub>2</sub> | 22     | 25     | 30     | 35     | 40     | 48     |
| Wrench size across flats         | S <sub>1</sub> | 27     | 32     | 41     | 50     | 58     | 70     |
| Weight                           | ca. kg         | 0.24   | 0.40   | 0.70   | 1.07   | 1.65   | 2.65   |
| Coeff. of discharge from 3.0 bar | α <sub>w</sub> | 0.47   | 0.37   | 0.52   | 0.57   | 0.52   | 0.50   |

Dimensions in mm.

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### Discharge capacities

Calculation of flow rate acc. to AD2000-Merkblatt A2

Medium:

**Air** in m<sup>3</sup>/h at 0°C and 1013.25 mbar

**Saturated steam** in kg/h

The capacity indicated below is for a fully opened valve.

d<sub>0</sub> - orifice

A<sub>0</sub> - flow area

| Set pressure in bar (g) | GW                                | 1/2   | 3/4   | 1     | 1-1/4 | 1-1/2 | 2               | 1/2   | 3/4   | 1     | 1-1/4 | 1-1/2 | 2     |
|-------------------------|-----------------------------------|-------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|-------|-------|
|                         | d <sub>0</sub> (mm)               | 12.0  | 15.0  | 18.0  | 20.0  | 24.0  | 28.0            | 12.0  | 15.0  | 18.0  | 20.0  | 24.0  | 28.0  |
|                         | A <sub>0</sub> (mm <sup>2</sup> ) | 113.1 | 176.7 | 254.5 | 314.2 | 452.4 | 615.8           | 113.1 | 176.7 | 254.5 | 314.2 | 452.2 | 615.8 |
| Air                     |                                   |       |       |       |       |       | Saturated steam |       |       |       |       |       |       |
| 0.2                     |                                   | 28    | 38    | 69    | 96    | 123   | 159             | 27    | 36    | 65    | 90    | 116   | 150   |
| 0.4                     |                                   | 41    | 55    | 101   | 138   | 180   | 237             | 35    | 47    | 87    | 118   | 154   | 203   |
| 0.5                     |                                   | 46    | 61    | 115   | 155   | 204   | 271             | 39    | 51    | 96    | 129   | 171   | 227   |
| 1.0                     |                                   | 68    | 89    | 172   | 231   | 306   | 408             | 54    | 70    | 136   | 182   | 242   | 322   |
| 2.0                     |                                   | 114   | 141   | 284   | 392   | 505   | 660             | 90    | 111   | 223   | 308   | 397   | 519   |
| 3.0                     |                                   | 157   | 193   | 390   | 527   | 693   | 907             | 122   | 150   | 304   | 412   | 541   | 708   |
| 4.0                     |                                   | 196   | 242   | 489   | 662   | 869   | 1138            | 153   | 188   | 380   | 514   | 675   | 884   |
| 5.0                     |                                   | 237   | 291   | 590   | 798   | 1048  | 1372            | 183   | 225   | 455   | 616   | 809   | 1058  |
| 6.0                     |                                   | 277   | 341   | 689   | 933   | 1225  | 1604            | 213   | 262   | 530   | 717   | 941   | 1232  |
| 7.0                     |                                   | 317   | 390   | 789   | 1067  | 1402  | 1835            | 243   | 298   | 604   | 817   | 1073  | 1405  |
| 8.0                     |                                   | 358   | 440   | 891   | 1206  | 1584  | 2073            | 272   | 335   | 678   | 917   | 1205  | 1577  |
| 9.0                     |                                   | 398   | 490   | 991   | 1341  | 1762  | 2306            | 302   | 371   | 751   | 1017  | 1335  | 1748  |
| 10.0                    |                                   | 439   | 540   | 1093  | 1479  | 1943  | 2543            | 331   | 407   | 824   | 1116  | 1466  | 1918  |
| 12.0                    |                                   | 519   | 639   | 1293  | 1750  | 2299  | 3009            | -     | -     | -     | -     | -     | -     |
| 14.0                    |                                   | 600   | 738   | 1493  | 2021  | 2655  | 3475            | -     | -     | -     | -     | -     | -     |
| 16.0                    |                                   | 680   | 837   | 1693  | 2292  | 3011  | 3940            | -     | -     | -     | -     | -     | -     |
| 18.0                    |                                   | 761   | 936   | 1894  | 2563  | -     | -               | -     | -     | -     | -     | -     | -     |
| 20.0                    |                                   | 849   | 1044  | 2114  | 2861  | -     | -               | -     | -     | -     | -     | -     | -     |