

## Safety Valves

### Type 06216, Type 06217 with protection cap



**Safety Valves, brass,**  
**type tested TÜV-SV.1090 S/G**

Standard safety valve  
with FPM valve seal, open bonnet, with discharge holes  
Inlet: male thread type G (BSPP) acc. to ISO 228/1

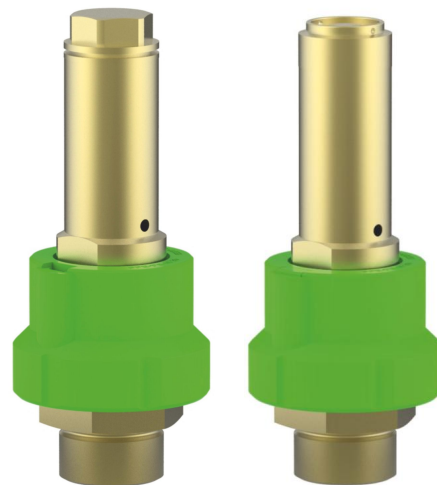
**Part No. 06216.X.0001**

**Part No. 06217.X.0001**

with lifting device and protection cap (polycarbonate)

Available options - on request only:

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

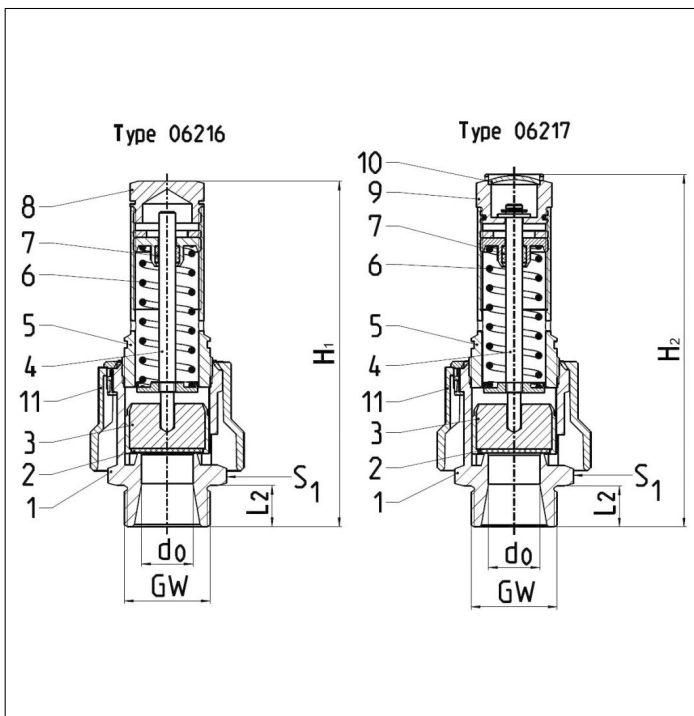


#### Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air and similar gases.

Working temperature: -30°C / -22°F (243K) up to +130°C / +266°F (403K), suitable for horizontal installation

| Materials         | DIN EN          | ASME/ASTM        |
|-------------------|-----------------|------------------|
| 1 Body            | CW617N          | B 283 UNS C37700 |
| 2 Valve seal      | FPM (Viton-GLT) |                  |
| 3 Disc            | CW614N          | B 455 UNS C38500 |
| 4 Stem            | CW614N          | B 455 UNS C38500 |
| 5 Bonnet          | CW614N          | B 455 UNS C38500 |
| 6 Spring          | 1.1200          | A 227            |
| 7 Stem guide      | PTFE            |                  |
| 8 Cap             | CW614N          | B 455 UNS C38500 |
| 9 Lifting device  | CW614N          | B 455 UNS C38500 |
| 10 Closing cap    | CW507L          | B 36 UNS C26800  |
| 11 Protection cap |                 |                  |



| Type 06216, Type 06217           | Technical data |        |        |        |        |        |        |
|----------------------------------|----------------|--------|--------|--------|--------|--------|--------|
| Nominal size                     | GW             | 1/2    | 3/4    | 1      | 1-1/4  | 1-1/2  | 2      |
| Orifice                          | d <sub>0</sub> | 12     | 15     | 20     | 25     | 32     | 40     |
| Dimension code                   | .X.            | 0400   | 0600   | 1000   | 1200   | 1400   | 2000   |
| Set pressure range               | bar            | 0.2-25 | 0.2-30 | 0.2-30 | 0.2-22 | 0.2-16 | 0.2-12 |
| Height                           | H <sub>1</sub> | 103    | 122    | 149    | 169    | 198    | 224    |
| Height                           | H <sub>2</sub> | 107    | 126    | 150    | 172    | 200    | 228    |
| Length                           | L <sub>2</sub> | 14     | 16     | 18     | 20     | 22     | 25     |
| Diameter                         | D              | 41.4   | 49.0   | 62.5   | 74.8   | 86.0   | 109.0  |
| Wrench size across flats         | S <sub>1</sub> | 27     | 32     | 41     | 50     | 55     | 70     |
| Weight                           | ca. kg         | 0.25   | 0.41   | 0.72   | 1.23   | 1.73   | 3.09   |
| Coeff. of discharge from 3.0 bar | α <sub>w</sub> | 0.83   | 0.83   | 0.73   | 0.71   | 0.69   | 0.66   |
| Coeff. of discharge from 3.0 bar | rated slope    | 2.59   | 4.10   | 6.79   | 10.15  | 16.50  | 24.80  |

Dimensions in mm.

# Safety Valves

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### Discharge capacities

Medium:

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

Air in SCFM at 60°F (15.6°C) and 14.7 psia (1013.25 mbar)

The capacity indicated below is for a fully opened valve.

d<sub>0</sub> - orifice

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

Calculation of discharge capacity acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1 resp. ASME Code Sec. VIII.

| Set pressure in bar (g)  | GW<br>d <sub>0</sub> (mm)<br>A <sub>0</sub> (mm <sup>2</sup> )<br>Medium | 1/2<br>12.0<br>113.1 | 3/4<br>15.0<br>176.7 | 1<br>20.0<br>314.2 | 1-1/4<br>25.0<br>490.9 | 1-1/2<br>32.0<br>804.2 | 2<br>40.0<br>1256.6 |
|--------------------------|--------------------------------------------------------------------------|----------------------|----------------------|--------------------|------------------------|------------------------|---------------------|
| Air in m <sup>3</sup> /h |                                                                          |                      |                      |                    |                        |                        |                     |
| 0.2                      |                                                                          | 49                   | 78                   | 128                | 194                    | 317                    | 436                 |
| 0.5                      |                                                                          | 83                   | 133                  | 211                | 309                    | 518                    | 712                 |
| 1.0                      |                                                                          | 124                  | 196                  | 308                | 459                    | 776                    | 1085                |
| 2.0                      |                                                                          | 201                  | 317                  | 495                | 752                    | 1215                   | 1760                |
| 3.0                      |                                                                          | 276                  | 432                  | 675                | 1026                   | 1634                   | 2442                |
| 4.0                      |                                                                          | 347                  | 542                  | 847                | 1288                   | 2051                   | 3065                |
| 5.0                      |                                                                          | 418                  | 654                  | 1022               | 1553                   | 2473                   | 3696                |
| 6.0                      |                                                                          | 489                  | 764                  | 1194               | 1815                   | 2890                   | 4320                |
| 7.0                      |                                                                          | 560                  | 874                  | 1367               | 2077                   | 3308                   | 4944                |
| 8.0                      |                                                                          | 632                  | 988                  | 1544               | 2347                   | 3737                   | 5585                |
| 9.0                      |                                                                          | 703                  | 1098                 | 1717               | 2610                   | 4156                   | 6211                |
| 10.0                     |                                                                          | 775                  | 1212                 | 1894               | 2879                   | 4584                   | 6851                |
| 11.0                     |                                                                          | 846                  | 1322                 | 2068               | 3142                   | 5003                   | 7478                |
| 12.0                     |                                                                          | 917                  | 1433                 | 2241               | 3406                   | 5423                   | 8105                |
| 14.0                     |                                                                          | 1059                 | 1655                 | 2588               | 3933                   | 6263                   | -                   |
| 16.0                     |                                                                          | 1201                 | 1877                 | 2935               | 4460                   | 7102                   | -                   |
| 18.0                     |                                                                          | 1343                 | 2099                 | 3282               | 4988                   | -                      | -                   |
| 20.0                     |                                                                          | 1500                 | 2343                 | 3664               | 5567                   | -                      | -                   |
| 22.0                     |                                                                          | 1643                 | 2567                 | 4014               | 6100                   | -                      | -                   |
| 25.0                     |                                                                          | 1858                 | 2903                 | 4539               | -                      | -                      | -                   |
| 26.0                     |                                                                          | -                    | 3015                 | 4714               | -                      | -                      | -                   |
| 28.0                     |                                                                          | -                    | 3239                 | 5064               | -                      | -                      | -                   |
| 30.0                     |                                                                          | -                    | 3496                 | 5466               | -                      | -                      | -                   |

| Set pressure in psig | GW<br>d <sub>0</sub> (inch)<br>A <sub>0</sub> (in <sup>2</sup> )<br>Medium | 1/2<br>0.472<br>0.175 | 3/4<br>0.591<br>0.274 | 1<br>0.787<br>0.487 | 1-1/4<br>0.984<br>0.761 | 1-1/2<br>1.260<br>1.247 | 2<br>1.575<br>1.948 |
|----------------------|----------------------------------------------------------------------------|-----------------------|-----------------------|---------------------|-------------------------|-------------------------|---------------------|
| Air in SCFM          |                                                                            |                       |                       |                     |                         |                         |                     |
| 15                   |                                                                            | 85                    | 134                   | 222                 | 332                     | 540                     | 811                 |
| 20                   |                                                                            | 98                    | 155                   | 256                 | 383                     | 622                     | 935                 |
| 30                   |                                                                            | 124                   | 196                   | 324                 | 484                     | 787                     | 1183                |
| 40                   |                                                                            | 152                   | 241                   | 399                 | 596                     | 969                     | 1456                |
| 50                   |                                                                            | 181                   | 286                   | 473                 | 707                     | 1150                    | 1729                |
| 60                   |                                                                            | 209                   | 331                   | 548                 | 819                     | 1332                    | 2001                |
| 70                   |                                                                            | 238                   | 376                   | 623                 | 931                     | 1513                    | 2274                |
| 80                   |                                                                            | 266                   | 421                   | 697                 | 1042                    | 1695                    | 2547                |
| 90                   |                                                                            | 294                   | 466                   | 772                 | 1154                    | 1876                    | 2820                |
| 100                  |                                                                            | 323                   | 511                   | 847                 | 1266                    | 2058                    | 3093                |
| 110                  |                                                                            | 351                   | 556                   | 921                 | 1377                    | 2239                    | 3365                |
| 120                  |                                                                            | 380                   | 601                   | 996                 | 1489                    | 2421                    | 3638                |
| 130                  |                                                                            | 408                   | 647                   | 1071                | 1601                    | 2602                    | 3911                |
| 140                  |                                                                            | 437                   | 692                   | 1145                | 1712                    | 2784                    | 4184                |
| 150                  |                                                                            | 465                   | 737                   | 1220                | 1824                    | 2965                    | 4457                |
| 160                  |                                                                            | 494                   | 782                   | 1295                | 1936                    | 3147                    | 4729                |
| 170                  |                                                                            | 522                   | 827                   | 1370                | 2047                    | 3328                    | 5002                |
| 180                  |                                                                            | 551                   | 872                   | 1444                | 2159                    | 3510                    | -                   |
| 190                  |                                                                            | 579                   | 917                   | 1519                | 2271                    | 3691                    | -                   |
| 200                  |                                                                            | 608                   | 962                   | 1594                | 2382                    | 3873                    | -                   |
| 210                  |                                                                            | 636                   | 1007                  | 1668                | 2494                    | 4054                    | -                   |
| 220                  |                                                                            | 665                   | 1052                  | 1743                | 2606                    | 4236                    | -                   |
| 230                  |                                                                            | 693                   | 1098                  | 1818                | 2717                    | 4417                    | -                   |
| 240                  |                                                                            | 722                   | 1143                  | 1892                | 2829                    | -                       | -                   |
| 250                  |                                                                            | 750                   | 1188                  | 1967                | 2940                    | -                       | -                   |
| 260                  |                                                                            | 779                   | 1233                  | 2042                | 3052                    | -                       | -                   |
| 270                  |                                                                            | 807                   | 1278                  | 2116                | 3164                    | -                       | -                   |
| 280                  |                                                                            | 836                   | 1323                  | 2191                | 3275                    | -                       | -                   |
| 290                  |                                                                            | 864                   | 1368                  | 2266                | 3387                    | -                       | -                   |
| 300                  |                                                                            | 893                   | 1413                  | 2341                | 3499                    | -                       | -                   |
| 315                  |                                                                            | 936                   | 1481                  | 2453                | 3666                    | -                       | -                   |
| 330                  |                                                                            | 978                   | 1549                  | 2565                | -                       | -                       | -                   |
| 350                  |                                                                            | 1035                  | 1639                  | 2714                | -                       | -                       | -                   |
| 360                  |                                                                            | 1064                  | 1684                  | 2789                | -                       | -                       | -                   |
| 375                  |                                                                            | -                     | 1752                  | 2901                | -                       | -                       | -                   |
| 400                  |                                                                            | -                     | 1864                  | 3087                | -                       | -                       | -                   |
| 425                  |                                                                            | -                     | 1977                  | 3274                | -                       | -                       | -                   |
| 435                  |                                                                            | -                     | 2022                  | 3349                | -                       | -                       | -                   |