

## → Series 810



## ■ MATERIAL



## ■ SPECIFICATION



1/4" – 2"

– 60°C to + 225°C  
depending on version0,2 – 50 bar  
depending on  
nominal diameter

## ■ SUITABLE FOR

Air, gases and vapours neutral



## ■ EXAMPLES OF USE

For the protection of:

- pressure tanks and
  - pressure systems
- for air and other neutral, non-poisonous and non-flammable gases which can be freely discharged into the environment. Please observe plant-specific regulations and use of appropriate valve version and sealing material.

- compressors
- pressure booster plants air-side
- paint spray shops
- pneumatic control units
- transport- and railway applications

**Safety valves are set and sealed at the factory.**

## ■ APPROVALS

|                                    |                             |
|------------------------------------|-----------------------------|
| TÜV Type test approval 2055        | D/G                         |
| ASME                               | G (DN 8 – DN 50)            |
| CRN                                | G (DN 8 – DN 25)            |
| EU type examination                | S/G                         |
| TSG ZF001-2006                     | D/G (S/G) (DN 8 – DN 25)    |
| KGS                                | G                           |
| KOSHA                              | G (DN 8 – DN 25) (< 10 bar) |
| TR ZU 032/2013 - TR ZU 010/2011    | D/G (S/G) (DN 8 – DN 50)    |
| <b>Type approval Deutsche Bahn</b> |                             |
| <b>Requirements</b>                |                             |
| AD 2000 Data sheet A2              | ASME-Code Sec. VIII Div. 1  |
| DIN EN ISO 4126-1                  | KGS AA 319                  |
| PED 2014/68/EU                     | UK PESR 2016 No. 1105       |

**Classification society**

|                                       |         |
|---------------------------------------|---------|
| DNV                                   | DNV     |
| Lloyd's Register EMEA                 | LR EMEA |
| Bureau Veritas                        | BV      |
| American Bureau of Shipping           | ABS     |
| Russian Maritime Register of Shipping | RS      |
| Registro Italiano Navale              | RINA    |

## ■ MATERIALS

| Component      | Material        | DIN EN | ASME   |
|----------------|-----------------|--------|--------|
| Inlet body     | Brass           | CW617N | CW617N |
| Outlet body    | Brass           | CW617N | CW617N |
| Internal parts | Brass           | CW617N | CW617N |
| Spring         | Stainless steel | 1.4568 | 631    |

|          |          |  |
|----------|----------|--|
| <b>s</b> | Standard | cylindrical form, atmospheric discharge, for air and similar neutral, non-toxic and non-flammable gases that can be freely discharged into the atmosphere. |
|----------|----------|--|

## ■ MEDIUM

|          |         |                               |
|----------|---------|-------------------------------|
| <b>G</b> | gaseous | Air and similar neutral gases |
|----------|---------|-------------------------------|

## ■ TYPE OF LIFTING MECHANISM

|          |  |  |
|----------|--|--|
| <b>K</b> | Standard with twist-type lifting mechanism |  |
| <b>O</b> | without lifting device                     |  |

## ■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

| Nominal diameter DN                        | 8        | 10        | 15        | 20        | 25      | 32          | 40          | 50      |
|--|----------|-----------|-----------|-----------|---------|-------------|-------------|---------|
| Inlet                                      | 1/4" (8) | 3/8" (10) | 1/2" (15) | 3/4" (20) | 1" (25) | 1 1/4" (32) | 1 1/2" (40) | 2" (50) |
| Atmospheric discharge via outlet apertures | ■        | ■         | ■         | ■         | ■       | ■           | ■           | ■       |

## ■ TYPE OF CONNECTION INLET / OUTLET THREADED CONNECTIONS

|                   |          |                       |                           |
|-------------------|----------|-----------------------|---------------------------|
| <b>m / -</b>      | Standard | Male thread BSP-P / - | DIN EN ISO 228-1 / -      |
| <b>BSP-Tm / -</b> |          | Male thread BSP-T / - | DIN EN 10226, ISO 7-1 / - |
| <b>NPT-m / -</b>  |          | Male thread NPT-m / - | ANSI B1.20.1 / -          |

## ■ SEALS

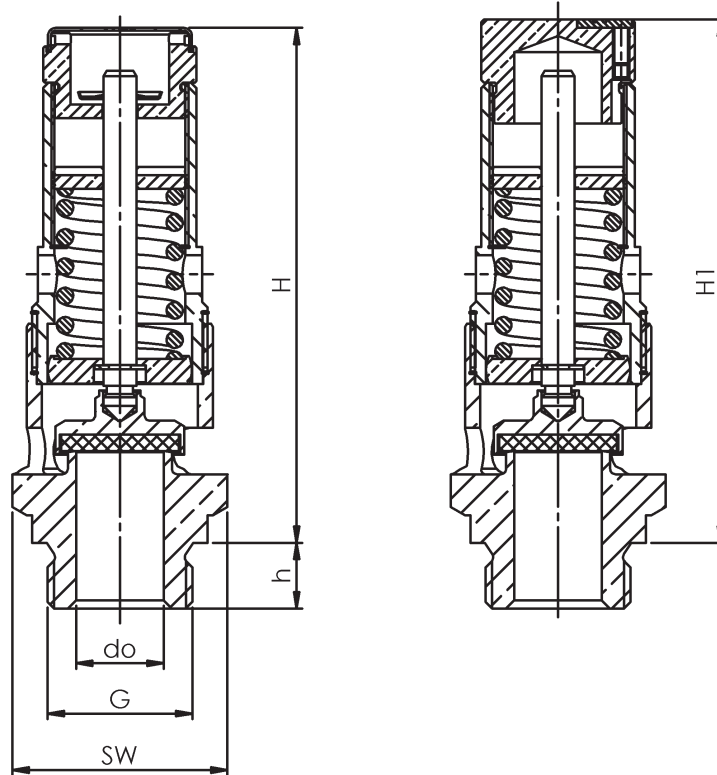
|             |                         |                                   |                 |
|-------------|-------------------------|-----------------------------------|-----------------|
| <b>FKM</b>  | Fluorocarbon            | Elastomere flat seal 0,2 – 25 bar | -20°C to +200°C |
| <b>PTFE</b> | Polytetrafluoroethylene | Flat seal 0,2 – 50 bar            | -60°C to +225°C |

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

| Series 810: Connection, installation dimensions, ranges of adjustment |                     |          |           |         |           |         |           |         |         |             |             |         |
|---|---------------------|----------|-----------|---------|-----------|---------|-----------|---------|---------|-------------|-------------|---------|
| Nominal diameter  | DN                  | 8        | 10        |         | 15        |         | 20        |         | 25      | 32          | 40          | 50      |
| Connection DIN EN ISO 228   | G                   | 1/4" (8) | 3/8" (10) |         | 1/2" (15) |         | 3/4" (20) |         | 1" (25) | 1 1/4" (32) | 1 1/2" (40) | 2" (50) |
| Installation dimensions in mm   | H                   | 60       | 65        | 78      | 66        | 79      | 94        | 104     | 111     | 133         | 164         | 171     |
|   | H1                  | 63       | 68        | 81      | 68        | 82      | 96        | 106     | 113     | 135         | 161         | 165     |
|   | h                   | 10       | 10        | 10      | 12        | 12      | 12        | 12      | 14      | 20          | 22          | 24      |
|   | SW                  | 19       | 24        | 24      | 27        | 27      | 34        | 34      | 41      | 50          | 60          | 68      |
| Coefficients of flow ISO 4126-1                                       | $\alpha_w/K_{gr}^1$ | 0,77     | 0,79      |         | 0,8       |         | 0,79      |         | 0,77    | 0,67        | 0,71        | 0,74    |
| Coefficients of flow ASME-Code Sec. VIII Div. 1                       | (90%) $K_d$         | 0,758    | 0,758     |         | 0,758     |         | 0,758     |         | 0,758   | 0,758       | 0,758       | 0,758   |
|   | do                  | 7,5      | 10        | 10      | 11        | 11      | 16        | 16      | 20      | 25          | 32          | 40      |
| Weight  | kg                  | 0,1      | 0,14      | 0,16    | 0,17      | 0,19    | 0,35      | 0,4     | 0,6     | 0,97        | 1,85        | 2,45    |
| Range of adjustment   | bar                 | 0,2-50   | 0,2-9     | 9,1-50  | 0,2-7     | 7,1-50  | 0,2-9     | 9,1-50  | 0,2-50  | 0,2-16      | 0,2-16      | 0,2-16  |
| Range of adjustment ASME  | psi                 | 15-725   | 15-130    | 131-725 | 15-102    | 103-725 | 15-130    | 131-725 | 15-725  | 30-232      | 30-232      | 30-232  |

<sup>1</sup>Coefficients of flow for blow-off pressures for blow-off pressures > 4,0 bar. For lower pressures refer to values in the capacity table.

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



| Series | Valve version | Medium | Lifting device | Nominal diameter DN | Connection type |        | Connection size |        | Seal | Options | Set pressure | Quantity |
|--------|---------------|--------|----------------|---------------------|-----------------|--------|-----------------|--------|------|---------|--------------|----------|
|        |               |        |                |                     | Inlet           | Outlet | Inlet           | Outlet |      |         |              |          |
| 810    | s             | G      | K              | 10                  | m               | –      | 10              | –      | FKM  | 11,5    | 50           |          |
| 810    | s             | G      | K              |                     |                 | –      |                 | –      |      |         |              |          |
| 810    | s             | G      | K              |                     |                 | –      |                 | –      |      |         |              |          |
| 810    | s             | G      | K              |                     |                 | –      |                 | –      |      |         |              |          |

### ■ PROPERTIES

|            |  |                          |            |                                   |                          |
|------------|--|--------------------------|------------|-----------------------------------|--------------------------|
| <b>GOX</b> | Especially for gaseous O2 applications by employment of specific materials including oil- and grease free production process | <input type="checkbox"/> | <b>P03</b> | Galvanically nickel-plated finish | <input type="checkbox"/> |
| <b>P01</b> | Oil- and grease-free production  | <input type="checkbox"/> | <b>P04</b> | Chrome-plated finish              | <input type="checkbox"/> |
| <b>P02</b> | Chemically nickel-plated finish  | <input type="checkbox"/> |            |                                   | <input type="checkbox"/> |

### ■ CERTIFICATES / APPROVALS

|            |   |                          |            |   |                          |
|------------|---|--------------------------|------------|---|--------------------------|
| <b>C01</b> | Factory certificate acc. DIN EN 10204 2.2 (WKZ 2.2)   | <input type="checkbox"/> | <b>C06</b> | ATEX evaluation acc. to 2014/34/EU  | <input type="checkbox"/> |
| <b>C02</b> | Test certificate acc. DIN EN 10204 3.1 (WPZ 3.1)  | <input type="checkbox"/> | <b>C07</b> | SIL evaluation relating to IEC 61508-2  | <input type="checkbox"/> |
| <b>C03</b> | Material test certificate acc. DIN EN 10204 3.1 (MPZ 3.1) (pressure retaining part)                 | <input type="checkbox"/> | <b>C09</b> | Seat tightness test with helium, leak detection method under vacuum incl. Factory Inspection Certificate 3.1 acc. to DIN EN 10204 | <input type="checkbox"/> |
| <b>C04</b> | TÜV/DEKRA individual inspection acc. EN 10204 3.2 (TÜV/DEKRA-APZ)                                   | <input type="checkbox"/> | <b>C10</b> | Certificate of oil- and grease free production  | <input type="checkbox"/> |
| <b>C05</b> | Manufacturer certification (FDA, USP 3, 3-A,...), Please indicate description of certificate: ..... | <input type="checkbox"/> | <b>C11</b> | Certification of the production process especially for gaseous oxygen applications by employment of specific materials            | <input type="checkbox"/> |

### ■ ADMISSIONS / ACCREDITATIONS

|             |  |                          |            |  |                          |
|-------------|--|--------------------------|------------|--|--------------------------|
| <b>AA1</b>  | EC Type examination acc. to Directive 2014/68/EU   | <input type="checkbox"/> | <b>AK1</b> | Det Norske Veritas (DNV) type approval   | <input type="checkbox"/> |
| <b>AA2</b>  | TÜV component test acc. to VdTÜV specification sheet SV 100                              | <input type="checkbox"/> | <b>AK2</b> | Lloyd's Register (LR) type approval  | <input type="checkbox"/> |
| <b>AA3</b>  | Certification acc. to ASME Boiler and Pressure Vessel Code, Section VIII.Div 1 (ASME)    | <input type="checkbox"/> | <b>AK3</b> | American Bureau of Shipping (ABS) type approval                                  | <input type="checkbox"/> |
| <b>AA4</b>  | EAC - certificate/declaration with passport for the valve and laser marking of the valve | <input type="checkbox"/> | <b>AK4</b> | Bureau Veritas (BV) type approval  | <input type="checkbox"/> |
| <b>AA5</b>  | Manufacture License of Special Equipment People's Republic of China (ML)                 | <input type="checkbox"/> | <b>AK5</b> | Russian Maritime Register of Shipping (RMRS) type approval                       | <input type="checkbox"/> |
| <b>AA6</b>  | Certification acc. to Korean Gas Safety Corporation (KGS) <sup>3</sup>                   | <input type="checkbox"/> | <b>AK6</b> | Registro Italiano Navale (RINA) type approval                                    | <input type="checkbox"/> |
| <b>AA7</b>  | Registration according to Canadian Registration Number (CRN) <sup>4</sup>                | <input type="checkbox"/> | <b>AL</b>  | Individual inspection by notified body inspector – (body to be indicated): ..... | <input type="checkbox"/> |
| <b>AA8</b>  | Certification according to "Deutsche Bahn"   | <input type="checkbox"/> |            |  | <input type="checkbox"/> |
| <b>AA9</b>  | Certification according to KOSHA   | <input type="checkbox"/> |            |  | <input type="checkbox"/> |
| <b>AA11</b> | UK Type examination acc. to Directive UK PESR 2016 No. 1105                              | <input type="checkbox"/> |            |  | <input type="checkbox"/> |

<sup>3</sup>KGS only in combination with ASME | <sup>4</sup>CRN only in combination with ASME

### ■ ENQUIRY

Copy and send to: [order@goetze-armaturen.de](mailto:order@goetze-armaturen.de).

| Series 810: Blowing-off rates at 10% above set pressure |                     |             |            |            |            |            |            |            |            |
|---|---------------------|-------------|------------|------------|------------|------------|------------|------------|------------|
|   | Nominal diameter DN | 8           | 10         | 15         | 20         | 25         | 32         | 40         | 50         |
|   | Set pressure bar    | d0 = 7,5 mm | d0 = 10 mm | d0 = 11 mm | d0 = 16 mm | d0 = 20 mm | d0 = 25 mm | d0 = 32 mm | d0 = 40 mm |
| Air<br>Nm³/h  | 0,2                 | 19          | 34         | 42         | 92         | 115        | 197        | 340        | 572        |
|   | 0,5                 | 32          | 59         | 75         | 157        | 190        | 297        | 510        | 841        |
|   | 1,0                 | 46          | 86         | 108        | 227        | 308        | 430        | 740        | 1212       |
|   | 1,5                 | 60          | 109        | 137        | 287        | 410        | 560        | 961        | 1592       |
|   | 2,0                 | 73          | 133        | 166        | 346        | 505        | 684        | 1173       | 1942       |
|   | 2,5                 | 86          | 158        | 194        | 406        | 604        | 810        | 1389       | 2299       |
|   | 3,0                 | 100         | 182        | 223        | 465        | 702        | 942        | 1621       | 2670       |
|   | 3,5                 | 112         | 205        | 251        | 525        | 797        | 1081       | 1872       | 3057       |
|   | 4,0                 | 125         | 228        | 280        | 584        | 890        | 1210       | 2101       | 3421       |
|   | 4,5                 | 138         | 251        | 308        | 644        | 980        | 1333       | 2314       | 3769       |
|   | 5,0                 | 151         | 275        | 337        | 703        | 1071       | 1456       | 2528       | 4118       |
|   | 5,5                 | 163         | 298        | 365        | 763        | 1162       | 1580       | 2742       | 4466       |
|   | 6,0                 | 176         | 321        | 394        | 822        | 1252       | 1703       | 2956       | 4814       |
|   | 6,5                 | 189         | 344        | 422        | 882        | 1343       | 1826       | 3170       | 5163       |
|   | 7,0                 | 202         | 368        | 451        | 941        | 1434       | 1949       | 3384       | 5511       |
|   | 7,5                 | 214         | 391        | 479        | 1001       | 1524       | 2072       | 3598       | 5860       |
|   | 8,0                 | 227         | 414        | 508        | 1060       | 1615       | 2196       | 3812       | 6208       |
|   | 8,5                 | 240         | 437        | 536        | 1120       | 1706       | 2319       | 4026       | 6556       |
|   | 9,0                 | 253         | 461        | 565        | 1179       | 1796       | 2442       | 4240       | 6905       |
|   | 9,5                 | 265         | 484        | 593        | 1239       | 1887       | 2565       | 4454       | 7253       |
|   | 10,0                | 278         | 507        | 621        | 1298       | 1977       | 2689       | 4668       | 7602       |
|   | 11,0                | 304         | 554        | 678        | 1417       | 2159       | 2935       | 5096       | 8299       |
|   | 12,0                | 329         | 600        | 735        | 1537       | 2340       | 3181       | 5524       | 8995       |
|   | 13,0                | 355         | 647        | 792        | 1656       | 2521       | 3428       | 5952       | 9692       |
|   | 14,0                | 380         | 693        | 849        | 1775       | 2703       | 3674       | 6379       | 10389      |
|   | 15,0                | 406         | 740        | 906        | 1894       | 2884       | 3921       | 6807       | 11086      |
|   | 16,0                | 431         | 786        | 963        | 2013       | 3065       | 4167       | 7235       | 11783      |
|   | 17,0                | 457         | 833        | 1020       | 2132       | 3246       |            |            |            |
|   | 18,0                | 482         | 879        | 1077       | 2251       | 3428       |            |            |            |
|   | 19,0                | 507         | 926        | 1134       | 2370       | 3609       |            |            |            |
|   | 20,0                | 533         | 972        | 1191       | 2489       | 3790       |            |            |            |
|   | 21,0                | 558         | 1019       | 1248       | 2608       | 3971       |            |            |            |
|   | 22,0                | 584         | 1065       | 1305       | 2727       | 4153       |            |            |            |
| 23,0  | 609                 | 1112        | 1362       | 2846       | 4334       |            |            |            |            |
| 24,0  | 635                 | 1158        | 1419       | 2965       | 4515       |            |            |            |            |
| 25,0  | 660                 | 1205        | 1476       | 3084       | 4696       |            |            |            |            |
| 26,0  | 686                 | 1251        | 1533       | 3203       | 4878       |            |            |            |            |
| 27,0  | 711                 | 1298        | 1590       | 3322       | 5059       |            |            |            |            |
| 28,0  | 737                 | 1344        | 1647       | 3441       | 5240       |            |            |            |            |
| 29,0  | 762                 | 1391        | 1704       | 3560       | 5422       |            |            |            |            |
| 30,0  | 788                 | 1437        | 1761       | 3679       | 5603       |            |            |            |            |
| 32,0  | 839                 | 1530        | 1875       | 3917       | 5965       |            |            |            |            |
| 34,0  | 890                 | 1623        | 1989       | 4155       | 6328       |            |            |            |            |
| 36,0  | 941                 | 1716        | 2103       | 4393       | 6690       |            |            |            |            |
| 38,0  | 992                 | 1809        | 2217       | 4631       | 7053       |            |            |            |            |
| 40,0  | 1043                | 1902        | 2331       | 4869       | 7416       |            |            |            |            |
| 42,0  | 1094                | 1995        | 2445       | 5107       | 7778       |            |            |            |            |
| 44,0  | 1145                | 2088        | 2558       | 5345       | 8141       |            |            |            |            |
| 46,0  | 1196                | 2181        | 2672       | 5583       | 8503       |            |            |            |            |
| 48,0  | 1247                | 2274        | 2786       | 5821       | 8866       |            |            |            |            |
| 50,0  | 1298                | 2367        | 2900       | 6059       | 9228       |            |            |            |            |

| Series 810: Blowing-off rates at 10% above set pressure |     |                              |                             |                             |                             |                             |                             |                             |                             |
|---|-----|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Nominal diameter DN                                     |     | 8                            | 10                          | 15                          | 20                          | 25                          | 32                          | 40                          | 50                          |
| Set pressure bar psi(g)                                 |     | d0 = 0,2953 inch<br>(7,5 mm) | d0 = 0,3937 inch<br>(10 mm) | d0 = 0,4331 inch<br>(11 mm) | d0 = 0,6299 inch<br>(16 mm) | d0 = 0,7874 inch<br>(20 mm) | d0 = 0,9843 inch<br>(25 mm) | d0 = 1,2598 inch<br>(32 mm) | d0 = 1,5748 inch<br>(40 mm) |
| Air   | 15  | 31                           | 55                          | 67                          | 142                         | 221                         |                             |                             |                             |
|   | 30  | 45                           | 81                          | 98                          | 207                         | 323                         | 505                         | 827                         | 1292                        |
| SCFM  | 40  | 56                           | 99                          | 120                         | 254                         | 397                         | 621                         | 1017                        | 1590                        |
|   | 50  | 66                           | 118                         | 143                         | 302                         | 472                         | 737                         | 1208                        | 1888                        |
|   | 60  | 77                           | 137                         | 165                         | 350                         | 546                         | 854                         | 1399                        | 2185                        |
|   | 70  | 87                           | 155                         | 188                         | 397                         | 621                         | 970                         | 1589                        | 2483                        |
|   | 80  | 98                           | 174                         | 210                         | 445                         | 695                         | 1086                        | 1780                        | 2781                        |
|   | 90  | 108                          | 192                         | 233                         | 493                         | 770                         | 1203                        | 1971                        | 3079                        |
|   | 100 | 119                          | 211                         | 255                         | 540                         | 844                         | 1319                        | 2161                        | 3377                        |
|   | 110 | 129                          | 230                         | 278                         | 588                         | 919                         | 1436                        | 2352                        | 3675                        |
|   | 120 | 140                          | 248                         | 300                         | 636                         | 993                         | 1552                        | 2543                        | 3973                        |
|   | 130 | 150                          | 267                         | 323                         | 683                         | 1068                        | 1668                        | 2733                        | 4271                        |
|   | 140 | 161                          | 286                         | 345                         | 731                         | 1142                        | 1785                        | 2924                        | 4569                        |
|   | 150 | 171                          | 304                         | 368                         | 779                         | 1217                        | 1901                        | 3115                        | 4866                        |
|   | 160 | 182                          | 323                         | 391                         | 826                         | 1291                        | 2017                        | 3305                        | 5164                        |
|   | 170 | 192                          | 341                         | 413                         | 874                         | 1366                        | 2134                        | 3496                        | 5462                        |
|   | 180 | 203                          | 360                         | 436                         | 922                         | 1440                        | 2250                        | 3686                        | 5760                        |
|   | 190 | 213                          | 379                         | 458                         | 969                         | 1515                        | 2366                        | 3877                        | 6058                        |
|   | 200 | 223                          | 397                         | 481                         | 1017                        | 1589                        | 2483                        | 4068                        | 6356                        |
|   | 210 | 234                          | 416                         | 503                         | 1065                        | 1663                        | 2599                        | 4258                        | 6654                        |
|   | 220 | 244                          | 434                         | 526                         | 1112                        | 1738                        | 2715                        | 4449                        | 6952                        |
|   | 230 | 255                          | 453                         | 548                         | 1160                        | 1812                        | 2832                        | 4640                        | 7250                        |
|   | 240 | 265                          | 472                         | 571                         | 1208                        | 1887                        |                             |                             |                             |
|   | 250 | 276                          | 490                         | 593                         | 1255                        | 1961                        |                             |                             |                             |
|   | 260 | 286                          | 509                         | 616                         | 1303                        | 2036                        |                             |                             |                             |
|   | 270 | 297                          | 528                         | 638                         | 1351                        | 2110                        |                             |                             |                             |
|   | 280 | 307                          | 546                         | 661                         | 1398                        | 2185                        |                             |                             |                             |
|   | 290 | 318                          | 565                         | 683                         | 1446                        | 2259                        |                             |                             |                             |
|   | 300 | 328                          | 583                         | 706                         | 1494                        | 2334                        |                             |                             |                             |
|   | 320 | 349                          | 621                         | 751                         | 1589                        | 2483                        |                             |                             |                             |
|   | 340 | 370                          | 658                         | 796                         | 1684                        | 2632                        |                             |                             |                             |
|   | 360 | 391                          | 695                         | 841                         | 1780                        | 2781                        |                             |                             |                             |
|   | 380 | 412                          | 732                         | 886                         | 1875                        | 2929                        |                             |                             |                             |
|   | 400 | 433                          | 770                         | 931                         | 1970                        | 3078                        |                             |                             |                             |
|   | 420 | 454                          | 807                         | 976                         | 2066                        | 3227                        |                             |                             |                             |
|   | 440 | 475                          | 844                         | 1021                        | 2161                        | 3376                        |                             |                             |                             |
|   | 460 | 496                          | 881                         | 1066                        | 2256                        | 3525                        |                             |                             |                             |
|   | 480 | 517                          | 919                         | 1111                        | 2351                        | 3674                        |                             |                             |                             |
|   | 500 | 538                          | 956                         | 1157                        | 2447                        | 3823                        |                             |                             |                             |
|   | 520 | 559                          | 993                         | 1202                        | 2542                        | 3972                        |                             |                             |                             |
|   | 540 | 580                          | 1030                        | 1247                        | 2637                        | 4121                        |                             |                             |                             |
|   | 560 | 600                          | 1067                        | 1292                        | 2733                        | 4270                        |                             |                             |                             |
|   | 580 | 621                          | 1105                        | 1337                        | 2828                        | 4419                        |                             |                             |                             |
|   | 600 | 642                          | 1142                        | 1382                        | 2923                        | 4568                        |                             |                             |                             |
|   | 620 | 663                          | 1179                        | 1427                        | 3019                        | 4717                        |                             |                             |                             |
|   | 640 | 684                          | 1216                        | 1472                        | 3114                        | 4866                        |                             |                             |                             |
|   | 660 | 705                          | 1254                        | 1517                        | 3209                        | 5015                        |                             |                             |                             |
|   | 680 | 726                          | 1291                        | 1562                        | 3305                        | 5164                        |                             |                             |                             |
|   | 700 | 747                          | 1328                        | 1607                        | 3400                        | 5313                        |                             |                             |                             |
|   | 725 | 773                          | 1375                        | 1663                        | 3519                        | 5499                        |                             |                             |                             |