



The double-acting rod sealing set profile ON consists of a PTFE rod sealing ring and an elastomer O-ring as a preloading element.

Profile ON is particularly suitable for sealing rods in control cylinders, servo-assisted equipment, machine tools and in quick acting cylinders.

The material combination of the slipper ring (PTFE) and the O-ring (elastomer) makes this product suitable for a wide range of applications, especially for aggressive media and/or high temperatures. Multiple compounds can alternatively be selected according to the individual application profile.

## Advantages

- Good sealing performance in extremely small assembly conditions.
- Can also be used for single-acting applications.
- Excellent wear resistance.
- Minimal break-away and dynamic friction and no stick-slip tendency ensures uniform motion even at low speeds.
- Good energy efficiency due to low friction.
- Insensitive to pressure peaks.
- High temperature resistance assured by suitable O-ring compound selection.
- High extrusion resistance.
- Adaptable to nearly all media thanks to high chemical resistance of the sealing ring and large O-ring compound selection.
- Dimensions according to ISO 7425-2.
- Short axial assembly length.
- Installation in closed and undercut housings.
- Available in diameters from 4 to 3000 mm.
- Machined small-volume series and samples available with short lead times.

## Range of Application

|  |                              |
|--|------------------------------|
| Operating pressure                       | ≤ 400 bar                    |
| in case of reduced extrusion gap (H7/f7) | ≤ 600 bar                    |
| Operating temperature                    | -30 to +100 °C <sup>1)</sup> |
| Surface speed                            | ≤ 4.0 m/s                    |

<sup>1)</sup> For requirements outside of standard temperature range please contact our consultancy service for suitable O-ring compound.

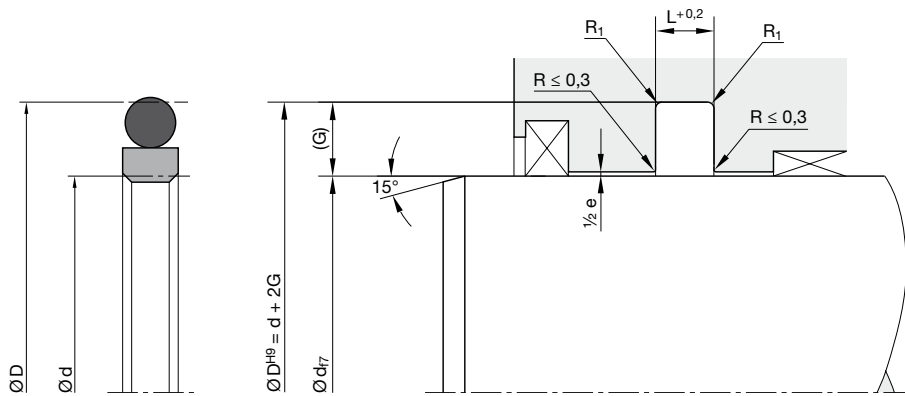
## Compounds

Sealing ring: Polon® 052, modified PTFE + 40 % bronze  
 O-ring: N0674, NBR elastomer with approx. 70 Shore A.

## Installation

For diameters < 30 mm open grooves are required.

This seal should only be used in combination with guiding elements (e.g. F3).

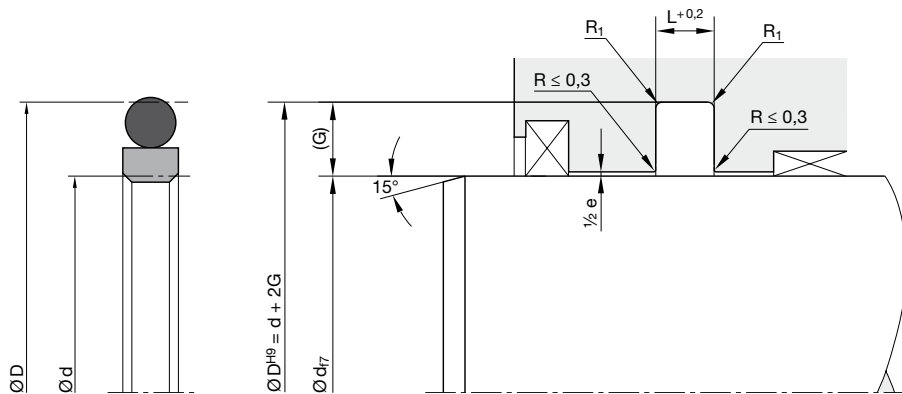


Housing dimensions

| Series No. | Cross-section | O-ring cross-section (mm) | Recommended rod Ø range |          | Groove width L (mm) | Groove depth G (mm) | Gap max. 0-200 bar e (mm) | Gap max. 200-400 bar e (mm) | Radius max. R <sub>1</sub> (mm) | ISO <sup>1)</sup> |
|------------|---------------|---------------------------|-------------------------|----------|---------------------|---------------------|---------------------------|-----------------------------|---------------------------------|-------------------|
|            |               |                           | ≥ d (mm)                | < d (mm) |                     |                     |                           |                             |                                 |                   |
| 00110      | A             | 1.78                      | 4                       | 17       | 2.2                 | 2.45                | 0.6 - 0.4                 | 0.4 - 0.2                   | 0.5                             |                   |
| 00110      | B             | 2.62                      | 8                       | 27       | 3.2                 | 3.65                | 0.8 - 0.5                 | 0.5 - 0.3                   | 0.5                             |                   |
| 00110      | C             | 3.53                      | 19                      | 60       | 4.2                 | 5.35                | 0.8 - 0.5                 | 0.5 - 0.3                   | 0.5                             |                   |
| 00110      | D             | 5.33                      | 38                      | 200      | 6.3                 | 7.55                | 1.0 - 0.6                 | 0.6 - 0.4                   | 0.9                             |                   |
| 00110      | E             | 6.99                      | 200                     | 256      | 8.1                 | 10.25               | 1.0 - 0.6                 | 0.6 - 0.4                   | 0.9                             |                   |
| 00110      | F             | 6.99                      | 256                     | 670      | 8.1                 | 12.00               | 1.2 - 0.7                 | 0.7 - 0.5                   | 0.9                             |                   |
| 00110      | G             | 8.40                      | 650                     | 1000     | 9.5                 | 13.65               | 1.4 - 0.8                 | 0.8 - 0.6                   | 0.9                             |                   |
| 00110      | H             | 12.00                     | 1000                    | -        | 13.8                | 19.00               | 1.4 - 0.8                 | 0.8 - 0.6                   | 0.9                             |                   |
| 00110      | K             | 1.78                      | 4                       | 8        | 2.2                 | 2.50                | 0.6 - 0.4                 | 0.4 - 0.2                   | 0.5                             | •                 |
| 00110      | L             | 2.62                      | 8                       | 19       | 3.2                 | 3.75                | 0.8 - 0.5                 | 0.5 - 0.3                   | 0.5                             | •                 |
| 00110      | M             | 3.53                      | 19                      | 38       | 4.2                 | 5.50                | 0.8 - 0.5                 | 0.5 - 0.3                   | 0.5                             | •                 |
| 00110      | N             | 5.33                      | 38                      | 200      | 6.3                 | 7.75                | 1.0 - 0.6                 | 0.6 - 0.4                   | 0.9                             | •                 |
| 00110      | O             | 6.99                      | 200                     | 256      | 8.1                 | 10.50               | 1.0 - 0.6                 | 0.6 - 0.4                   | 0.9                             | •                 |
| 00110      | P             | 6.99                      | 256                     | 650      | 8.1                 | 12.25               | 1.2 - 0.7                 | 0.7 - 0.5                   | 0.9                             | •                 |

1) Housing dimensions according to ISO 7425-2

Slipper seals



### Ordering example

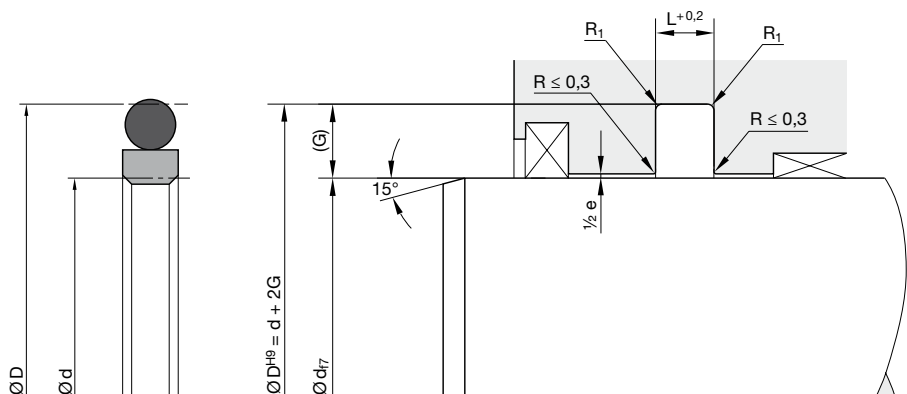
Rod diameter 40 mm

ON 0400 052 00111 D (40.0 x 55.1 x 6.3)

|       |                                    |              |               |  |
|-------|------------------------------------|--------------|---------------|--|
| ON    | Profile                            |              |               |  |
| 0400  | Rod diameter x 10                  |              |               |  |
| 052   | Compound                           |              |               |  |
| 00111 | Series no. / Compound code O-ring: |              |               |  |
| 00110 | without O-ring                     |              |               |  |
| 00111 | N0674 (NBR)                        | 70±5 Shore A | -30 / +110 °C |  |
| 00112 | V0747 (FKM)                        | 75±5 Shore A | -25 / +200 °C |  |
| 00113 | N0304 (NBR)                        | 75±5 Shore A | -50 / +110 °C |  |
| 00114 | E0540 (EPDM)                       | 80±5 Shore A | -40 / +150 °C |  |
| 00115 | N3578 (NBR)                        | 75±5 Shore A | -30 / +110 °C |  |
| 00116 | N3588 (NBR)                        | 90±5 Shore A | -20 / +110 °C |  |
| D     | Cross-section                      |              |               |  |

### Please note

For certain applications, it may be appropriate to use a non-standard cross-section - reduced or heavier. In these cases, please replace the standard cross-section code (in above example: "D") by the one you require (for example "C" or "E").

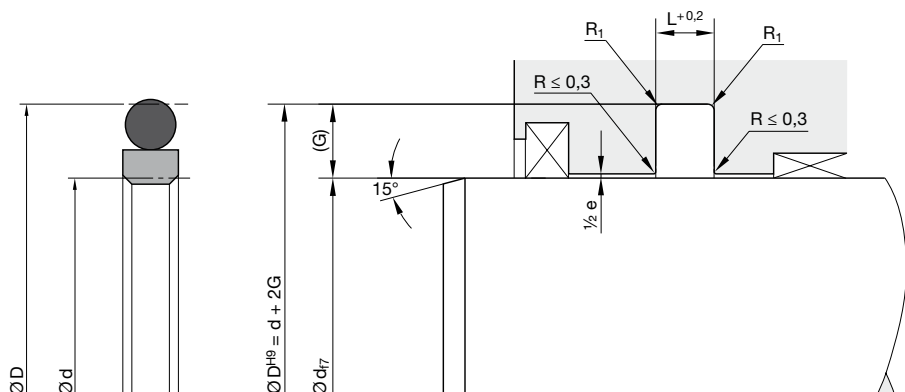


Standard range

| Groove |           |           |         | O-ring |          |          | iso <sup>1)</sup> | Groove |           |           |         | O-ring |          |          | iso <sup>1)</sup> |
|--------|-----------|-----------|---------|--------|----------|----------|-------------------|--------|-----------|-----------|---------|--------|----------|----------|-------------------|
| Size   | Ø d<br>mm | Ø D<br>mm | L<br>mm | No.    | CS<br>mm | ID<br>mm |                   | Size   | Ø d<br>mm | Ø D<br>mm | L<br>mm | No.    | CS<br>mm | ID<br>mm |                   |
| 0040   | 4         | 8.9       | 2.2     | 2-010  | 1.78     | 6.07     |                   | 0500   | 50        | 65.1      | 6.3     | 2-331  | 5.33     | 56.52    |                   |
| 0050   | 5         | 9.9       | 2.2     | 2-010  | 1.78     | 6.07     |                   | 0520   | 52        | 67.1      | 6.3     | 2-331  | 5.33     | 56.52    |                   |
| 0060   | 6         | 11.0      | 2.2     | 2-011  | 1.78     | 7.65     | •                 | 0550   | 55        | 70.1      | 6.3     | 2-332  | 5.33     | 59.69    |                   |
| 0070   | 7         | 11.9      | 2.2     | 2-012  | 1.78     | 9.25     |                   | 0560   | 56        | 67.0      | 4.2     | 2-229  | 3.53     | 59.92    |                   |
| 0080   | 8         | 13.0      | 2.2     | 2-012  | 1.78     | 9.25     | •                 | 0560   | 56        | 71.5      | 6.3     | 2-332  | 5.33     | 59.69    |                   |
| 0080   | 8         | 15.3      | 3.2     | 2-111  | 2.62     | 10.77    |                   | 0580   | 58        | 73.1      | 6.3     | 2-333  | 5.33     | 62.87    |                   |
| 0100   | 10        | 15.0      | 2.2     | 2-013  | 1.78     | 10.82    | •                 | 0600   | 60        | 75.1      | 6.3     | 2-334  | 5.33     | 66.04    |                   |
| 0100   | 10        | 17.3      | 3.2     | 2-112  | 2.62     | 12.37    |                   | 0630   | 63        | 74.0      | 4.2     | 2-231  | 3.53     | 66.27    |                   |
| 0120   | 12        | 17.0      | 2.2     | 2-015  | 1.78     | 14.00    | •                 | 0630   | 63        | 78.5      | 6.3     | 2-335  | 5.33     | 69.22    |                   |
| 0120   | 12        | 19.3      | 3.2     | 2-114  | 2.62     | 15.54    |                   | 0650   | 65        | 80.1      | 6.3     | 2-335  | 5.33     | 69.22    |                   |
| 0120   | 12        | 19.5      | 3.2     | 2-114  | 2.62     | 15.54    | •                 | 0700   | 70        | 85.1      | 6.3     | 2-337  | 5.33     | 75.57    |                   |
| 0140   | 14        | 19.0      | 2.2     | 2-016  | 1.78     | 15.60    | •                 | 0700   | 70        | 85.5      | 6.3     | 2-337  | 5.33     | 75.57    |                   |
| 0140   | 14        | 21.5      | 3.2     | 2-115  | 2.62     | 17.12    | •                 | 0750   | 75        | 90.1      | 6.3     | 2-339  | 5.33     | 81.92    |                   |
| 0150   | 15        | 22.3      | 3.2     | 2-116  | 2.62     | 18.72    |                   | 0800   | 80        | 95.1      | 6.3     | 2-340  | 5.33     | 85.09    |                   |
| 0160   | 16        | 23.5      | 3.2     | 2-116  | 2.62     | 18.72    | •                 | 0800   | 80        | 95.5      | 6.3     | 2-340  | 5.33     | 85.09    |                   |
| 0180   | 18        | 25.3      | 3.2     | 2-117  | 2.62     | 20.29    |                   | 0850   | 85        | 100.1     | 6.3     | 2-342  | 5.33     | 91.44    |                   |
| 0180   | 18        | 25.5      | 3.2     | 2-117  | 2.62     | 20.29    | •                 | 0900   | 90        | 105.1     | 6.3     | 2-343  | 5.33     | 94.62    |                   |
| 0200   | 20        | 27.5      | 3.2     | 2-118  | 2.62     | 21.89    | •                 | 0900   | 90        | 105.5     | 6.3     | 2-343  | 5.33     | 94.62    |                   |
| 0200   | 20        | 30.7      | 4.2     | 2-214  | 3.53     | 24.99    |                   | 0950   | 95        | 110.1     | 6.3     | 2-345  | 5.33     | 100.97   |                   |
| 0200   | 20        | 31.0      | 4.2     | 2-214  | 3.53     | 24.99    | •                 | 1000   | 100       | 115.1     | 6.3     | 2-346  | 5.33     | 104.14   |                   |
| 0220   | 22        | 29.5      | 3.2     | 2-120  | 2.62     | 25.07    | •                 | 1000   | 100       | 115.5     | 6.3     | 2-346  | 5.33     | 104.14   |                   |
| 0220   | 22        | 32.7      | 4.2     | 2-215  | 3.53     | 26.57    |                   | 1100   | 110       | 125.1     | 6.3     | 2-350  | 5.33     | 116.84   |                   |
| 0220   | 22        | 33.0      | 4.2     | 2-215  | 3.53     | 26.57    | •                 | 1100   | 110       | 125.5     | 6.3     | 2-350  | 5.33     | 116.84   |                   |
| 0250   | 25        | 32.5      | 3.2     | 2-122  | 2.62     | 26.24    | •                 | 1200   | 120       | 135.1     | 6.3     | 2-353  | 5.33     | 126.37   |                   |
| 0250   | 25        | 35.7      | 4.2     | 2-217  | 3.53     | 29.32    |                   | 1250   | 125       | 140.1     | 6.3     | 2-354  | 5.33     | 129.54   |                   |
| 0250   | 25        | 36.0      | 4.2     | 2-217  | 3.53     | 29.32    | •                 | 1250   | 125       | 140.5     | 6.3     | 2-354  | 5.33     | 129.54   |                   |
| 0260   | 26        | 36.7      | 4.2     | 2-218  | 3.53     | 31.34    |                   | 1300   | 130       | 145.1     | 6.3     | 2-356  | 5.33     | 135.89   |                   |
| 0280   | 28        | 38.7      | 4.2     | 2-219  | 3.53     | 32.92    |                   | 1400   | 140       | 155.1     | 6.3     | 2-359  | 5.33     | 145.42   |                   |
| 0280   | 28        | 39.0      | 4.2     | 2-219  | 3.53     | 32.92    | •                 | 1400   | 140       | 155.5     | 6.3     | 2-359  | 5.33     | 145.42   |                   |
| 0300   | 30        | 40.7      | 4.2     | 2-220  | 3.53     | 34.52    |                   | 1500   | 150       | 165.1     | 6.3     | 2-361  | 5.33     | 151.77   |                   |
| 0320   | 32        | 42.7      | 4.2     | 2-221  | 3.53     | 36.09    |                   | 1600   | 160       | 175.1     | 6.3     | 2-363  | 5.33     | 164.47   |                   |
| 0320   | 32        | 43.0      | 4.2     | 2-221  | 3.53     | 36.09    | •                 | 1600   | 160       | 175.5     | 6.3     | 2-363  | 5.33     | 164.47   |                   |
| 0350   | 35        | 45.7      | 4.2     | 2-222  | 3.53     | 37.69    |                   | 1600   | 160       | 181.0     | 8.1     | 2-439  | 6.99     | 164.47   |                   |
| 0360   | 36        | 47.0      | 4.2     | 2-223  | 3.53     | 40.87    | •                 | 1700   | 170       | 185.1     | 6.3     | 2-365  | 5.33     | 177.17   |                   |
| 0380   | 38        | 53.1      | 6.3     | 2-327  | 5.33     | 43.82    |                   | 1750   | 175       | 190.1     | 6.3     | 2-365  | 5.33     | 177.17   |                   |
| 0400   | 40        | 51.0      | 4.2     | 2-224  | 3.53     | 44.04    | •                 | 1800   | 180       | 195.1     | 6.3     | 2-366  | 5.33     | 183.52   |                   |
| 0400   | 40        | 55.1      | 6.3     | 2-328  | 5.33     | 46.99    |                   | 1800   | 180       | 195.5     | 6.3     | 2-366  | 5.33     | 183.52   |                   |
| 0420   | 42        | 57.1      | 6.3     | 2-328  | 5.33     | 46.99    |                   | 1800   | 180       | 201.0     | 8.1     | 2-442  | 6.99     | 183.52   |                   |
| 0450   | 45        | 56.0      | 4.2     | 2-226  | 3.53     | 50.39    | •                 | 1850   | 185       | 200.1     | 6.3     | 2-367  | 5.33     | 189.87   |                   |
| 0450   | 45        | 60.1      | 6.3     | 2-329  | 5.33     | 50.17    |                   | 1900   | 190       | 205.1     | 6.3     | 2-368  | 5.33     | 196.22   |                   |
| 0480   | 48        | 63.1      | 6.3     | 2-330  | 5.33     | 53.34    |                   | 1950   | 195       | 210.1     | 6.3     | 2-368  | 5.33     | 196.22   |                   |
| 0500   | 50        | 61.0      | 4.2     | 2-227  | 3.53     | 53.57    | •                 | 2000   | 200       | 220.5     | 8.1     | 2-445  | 6.99     | 202.57   |                   |

1) ISO 7425-2 • Further sizes on request.

Slipper seals



| Size | Groove    |           |         | No.   | O-ring   |          | iso <sup>1)</sup> |
|------|-----------|-----------|---------|-------|----------|----------|-------------------|
|      | Ø d<br>mm | Ø D<br>mm | L<br>mm |       | CS<br>mm | ID<br>mm |                   |
| 2000 | 200       | 221.0     | 8.1     | 2-445 | 6.99     | 202.57   | •                 |
| 2100 | 210       | 230.5     | 8.1     | 2-446 | 6.99     | 215.27   |                   |
| 2200 | 220       | 240.5     | 8.1     | 2-447 | 6.99     | 227.97   |                   |
| 2200 | 220       | 241.0     | 8.1     | 2-447 | 6.99     | 227.97   | •                 |
| 2300 | 230       | 250.5     | 8.1     | 2-448 | 6.99     | 240.67   |                   |
| 2400 | 240       | 260.5     | 8.1     | 2-449 | 6.99     | 240.67   |                   |
| 2500 | 250       | 270.5     | 8.1     | 2-449 | 6.99     | 253.37   |                   |
| 2500 | 250       | 271.0     | 8.1     | 2-449 | 6.99     | 253.37   | •                 |
| 2600 | 260       | 284.0     | 8.1     | 2-450 | 6.99     | 266.07   |                   |
| 2700 | 270       | 294.0     | 8.1     | 2-451 | 6.99     | 278.77   |                   |
| 2800 | 280       | 304.0     | 8.1     | 2-452 | 6.99     | 291.47   |                   |
| 2800 | 280       | 304.5     | 8.1     | 2-452 | 6.99     | 291.47   | •                 |
| 2900 | 290       | 314.0     | 8.1     | 2-453 | 6.99     | 304.17   |                   |
| 3000 | 300       | 324.0     | 8.1     | 2-453 | 6.99     | 304.17   |                   |
| 3100 | 310       | 334.0     | 8.1     | 2-454 | 6.99     | 316.87   |                   |
| 3200 | 320       | 344.0     | 8.1     | 2-455 | 6.99     | 329.57   |                   |
| 3200 | 320       | 344.5     | 8.1     | 2-455 | 6.99     | 329.57   | •                 |
| 3300 | 330       | 354.0     | 8.1     | 2-456 | 6.99     | 342.27   |                   |
| 3400 | 340       | 364.0     | 8.1     | 2-457 | 6.99     | 354.97   |                   |
| 3500 | 350       | 374.0     | 8.1     | 2-457 | 6.99     | 354.97   |                   |
| 3600 | 360       | 384.0     | 8.1     | 2-458 | 6.99     | 367.67   |                   |
| 3600 | 360       | 384.5     | 8.1     | 2-458 | 6.99     | 367.67   | •                 |
| 3700 | 370       | 394.0     | 8.1     | 2-459 | 6.99     | 380.37   |                   |
| 3800 | 380       | 404.0     | 8.1     | 2-460 | 6.99     | 393.07   |                   |
| 3900 | 390       | 414.0     | 8.1     | 2-461 | 6.99     | 405.26   |                   |
| 4000 | 400       | 424.0     | 8.1     | 2-461 | 6.99     | 405.26   |                   |
| 4100 | 410       | 434.0     | 8.1     | 2-462 | 6.99     | 417.96   |                   |
| 4200 | 420       | 444.0     | 8.1     | 2-463 | 6.99     | 430.66   |                   |
| 4300 | 430       | 454.0     | 8.1     | 2-464 | 6.99     | 443.36   |                   |
| 4400 | 440       | 464.0     | 8.1     | 2-464 | 6.99     | 443.36   |                   |
| 4500 | 450       | 474.0     | 8.1     | 2-465 | 6.99     | 456.06   |                   |
| 4600 | 460       | 484.0     | 8.1     | 2-466 | 6.99     | 468.76   |                   |
| 4700 | 470       | 494.0     | 8.1     | 2-467 | 6.99     | 481.46   |                   |
| 4800 | 480       | 504.0     | 8.1     | 2-468 | 6.99     | 494.16   |                   |
| 4900 | 490       | 514.0     | 8.1     | 2-469 | 6.99     | 506.86   |                   |
| 5000 | 500       | 524.0     | 8.1     | 2-469 | 6.99     | 506.86   |                   |
| 5200 | 520       | 544.0     | 8.1     | 2-470 | 6.99     | 532.26   |                   |
| 5500 | 550       | 574.0     | 8.1     | 2-471 | 6.99     | 557.66   |                   |
| 5700 | 570       | 594.0     | 8.1     | 2-472 | 6.99     | 582.68   |                   |
| 6000 | 600       | 624.0     | 8.1     | 2-473 | 6.99     | 608.08   |                   |
| 6200 | 620       | 644.0     | 8.1     | 2-474 | 6.99     | 633.48   |                   |
| 6400 | 640       | 664.0     | 8.1     | 2-475 | 6.99     | 658.88   |                   |

| Size | Groove    |           |         | No. | O-ring   |          | iso <sup>1)</sup> |
|------|-----------|-----------|---------|-----|----------|----------|-------------------|
|      | Ø d<br>mm | Ø D<br>mm | L<br>mm |     | CS<br>mm | ID<br>mm |                   |
| 6500 | 650       | 677.3     | 9.5     | -   | 8.40     | 660.00   |                   |
| 7000 | 700       | 727.3     | 9.5     | -   | 8.40     | 695.00   |                   |
| 8000 | 800       | 827.3     | 9.5     | -   | 8.40     | 810.00   |                   |
| 9000 | 900       | 927.3     | 9.5     | -   | 8.40     | 910.00   |                   |

1) ISO 7425-2 • Further sizes on request.