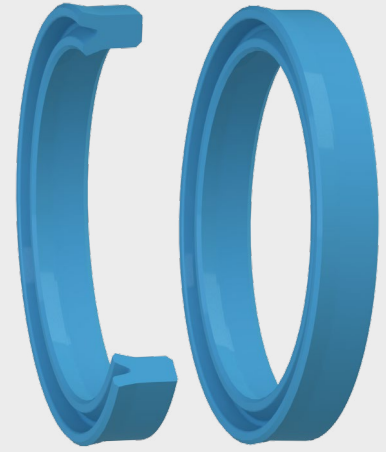


ROD SEALS BECA 231



DESCRIPTION

The BECA 231 profile is a U-ring type single acting rod seal with offset polyurethane lips. It can be assembled in a groove according to standard ISO 5597.

ADVANTAGES

Optimised sealing effect at both high and low pressures
 Excellent abrasion and extrusion resistance
 Assembly by deformation in closed groove

APPLICATIONS

Mobile hydraulics
 Injection presses
 Machine tools
 Presses
 Hydraulic cylinders

MATERIALS

PU 93 Shore A - Blue
 PU 96 Shore A - Blue
 High temp. PU 96 Shore A - Beige

Other grades of materials are available.
 Please contact our experts.

TECHNICAL DATA

| | |
|-------------|------------------------|
| Temperature | -30°C / +110°C |
| Pressure | 40 MPa |
| Speed | 0.5 m/sec |
| Media | Mineral hydraulic oils |

The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.

EXTRUSION GAPS

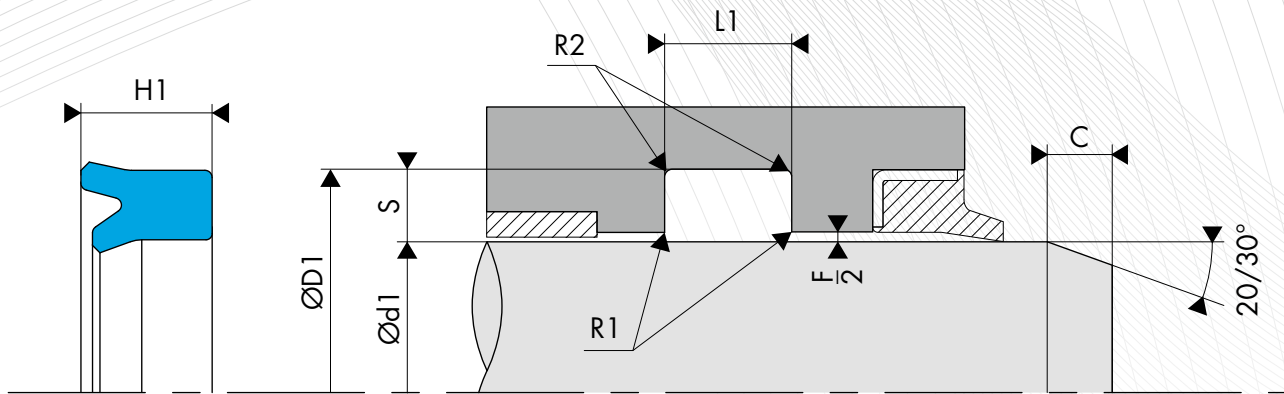
| Diameter of the rod $\varnothing d1$ | Radial gap F/2 | | | | |
|--------------------------------------|----------------|----------|----------|----------|----------|
| | ≤ 5 MPa | ≤ 10 MPa | ≤ 20 MPa | ≤ 30 MPa | ≤ 40 MPa |
| ≤ 60 mm | 0.40 | 0.30 | 0.20 | 0.15 | 0.10 |
| > 60 mm | 0.50 | 0.40 | 0.30 | 0.20 | 0.15 |

SURFACE ROUGHNESS

| Roughness | Dynamic surface area | Static surface area | Groove flanks |
|-----------|--------------------------|---------------------|---------------------|
| Ra | 0.1 - 0.4 μm | ≤1.6 μm | ≤3.2 μm |
| Rz | 0.63 - 2.5 μm | ≤6.3 μm | ≤10.0 μm |
| Rmax | 1.0 - 4.0 μm | ≤10.0 μm | ≤16.0 μm |

CHAMFERS AND RADIUS

| Radial section S | Radius R1 | Radius R2 | Chamfer C |
|------------------|-----------|-----------|-----------|
| 3.50 | 0.20 | 0.40 | 2.00 |
| 4.00 | 0.20 | 0.60 | 2.50 |
| 5.00 | 0.20 | 1.00 | 2.50 |
| 7.50 | 0.20 | 1.00 | 4.00 |
| 12.50 | 0.20 | 1.30 | 6.00 |
| 20.00 | 0.20 | 1.80 | 8.00 |



DIMENSIONS

| Part number | Rod diameter Ød1 f8 | Groove diameter ØD1 H10 | Seal height H1 | Groove width L1 0/+0.5 |
|-------------|------------------------|----------------------------|-------------------|---------------------------|
| 231.0060146 | 6.00 | 14.00 | 5.70 | 6.30 |
| 231.0080166 | 8.00 | 16.00 | 5.70 | 6.30 |
| 231.0100186 | 10.00 | 18.00 | 5.70 | 6.30 |
| 231.0100208 | 10.00 | 20.00 | 7.30 | 8.00 |
| 231.0120206 | 12.00 | 20.00 | 5.70 | 6.30 |
| 231.0120228 | 12.00 | 22.00 | 7.30 | 8.00 |
| 231.0140226 | 14.00 | 22.00 | 5.70 | 6.30 |
| 231.0140248 | 14.00 | 24.00 | 7.30 | 8.00 |
| 231.0160268 | 16.00 | 26.00 | 7.30 | 8.00 |
| 231.0200307 | 20.00 | 30.00 | 7.30 | 8.00 |
| 231.0200308 | 20.00 | 30.00 | 8.00 | 9.00 |
| 231.0220285 | 22.00 | 28.00 | 4.50 | 5.00 |
| 231.0220307 | 22.00 | 30.00 | 7.00 | 8.00 |
| 231.0220326 | 22.00 | 32.00 | 5.70 | 6.30 |
| 231.0220328 | 22.00 | 32.00 | 7.30 | 8.00 |
| 231.0250338 | 25.00 | 33.00 | 8.00 | 9.00 |
| 231.0250358 | 25.00 | 35.00 | 7.30 | 8.00 |
| 231.0280431 | 28.00 | 43.00 | 11.50 | 12.50 |
| 231.0300451 | 30.00 | 45.00 | 10.00 | 11.00 |
| 231.0350437 | 35.00 | 43.00 | 6.30 | 7.00 |
| 231.0350457 | 35.00 | 45.00 | 7.00 | 8.00 |
| 231.0360512 | 36.00 | 51.00 | 11.50 | 12.50 |
| 231.0400551 | 40.00 | 55.00 | 11.50 | 12.50 |
| 231.0420506 | 42.00 | 50.00 | 5.70 | 6.30 |
| 231.0450556 | 45.00 | 55.00 | 6.00 | 7.00 |
| 231.0450601 | 45.00 | 60.00 | 11.50 | 12.50 |
| 231.0500606 | 50.00 | 60.00 | 6.00 | 7.00 |
| 231.0500631 | 50.00 | 63.00 | 10.00 | 11.00 |
| 231.0500650 | 50.00 | 65.00 | 10.00 | 11.00 |
| 231.0500651 | 50.00 | 65.00 | 11.50 | 12.50 |
| 231.0550636 | 55.00 | 63.00 | 5.70 | 6.30 |
| 231.0560711 | 56.00 | 71.00 | 11.50 | 12.50 |
| 231.0560761 | 56.00 | 76.00 | 15.00 | 16.00 |
| 231.0630781 | 63.00 | 78.00 | 11.50 | 12.50 |
| 231.0630831 | 63.00 | 83.00 | 15.00 | 16.00 |
| 231.0650781 | 65.00 | 78.00 | 10.00 | 11.00 |
| 231.0650801 | 65.00 | 80.00 | 12.00 | 13.00 |
| 231.0700831 | 70.00 | 83.00 | 10.00 | 11.00 |
| 231.0700851 | 70.00 | 85.00 | 11.50 | 12.50 |

| Part number | Rod diameter Ød1 f8 | Groove diameter ØD1 H10 | Seal height H1 | Groove width L1 0/+0.5 |
|-------------|------------------------|----------------------------|-------------------|---------------------------|
| 231.0700901 | 70.00 | 90.00 | 15.00 | 16.00 |
| 231.0750881 | 75.00 | 88.00 | 10.00 | 11.00 |
| 231.0750900 | 75.00 | 90.00 | 10.00 | 11.00 |
| 231.0750901 | 75.00 | 90.00 | 11.50 | 12.50 |
| 231.0800951 | 80.00 | 95.00 | 11.50 | 12.50 |
| 231.0801005 | 80.00 | 100.00 | 15.00 | 16.00 |
| 231.0851009 | 85.00 | 100.00 | 9.00 | 10.00 |
| 231.0901007 | 90.00 | 100.00 | 6.50 | 7.50 |
| 231.0901051 | 90.00 | 105.00 | 11.50 | 12.50 |
| 231.0901101 | 90.00 | 110.00 | 15.00 | 16.00 |
| 231.0951109 | 95.00 | 110.00 | 9.00 | 10.00 |
| 231.0961061 | 96.00 | 106.00 | 12.00 | 13.00 |
| 231.1001081 | 100.00 | 108.00 | 11.50 | 12.50 |
| 231.1001151 | 100.00 | 115.00 | 10.00 | 11.00 |
| 231.1001201 | 100.00 | 120.00 | 15.00 | 16.00 |
| 231.1001251 | 100.00 | 125.00 | 19.00 | 20.00 |
| 231.1101251 | 110.00 | 125.00 | 9.60 | 10.60 |
| 231.1101301 | 110.00 | 130.00 | 15.00 | 16.00 |
| 231.1101351 | 110.00 | 135.00 | 19.00 | 20.00 |
| 231.1251451 | 125.00 | 145.00 | 15.00 | 16.00 |
| 231.1251501 | 125.00 | 150.00 | 19.00 | 20.00 |
| 231.1301501 | 130.00 | 150.00 | 13.00 | 14.00 |
| 231.1401601 | 140.00 | 160.00 | 15.00 | 16.00 |
| 231.1401651 | 140.00 | 165.00 | 19.00 | 20.00 |
| 231.1451601 | 145.00 | 160.00 | 9.60 | 10.60 |
| 231.1601851 | 160.00 | 185.00 | 19.00 | 20.00 |
| 231.1601902 | 160.00 | 190.00 | 24.00 | 25.00 |
| 231.1701901 | 170.00 | 190.00 | 16.00 | 17.00 |
| 231.1802051 | 180.00 | 205.00 | 19.00 | 20.00 |
| 231.1802102 | 180.00 | 210.00 | 24.00 | 25.00 |
| 231.1852001 | 185.00 | 200.00 | 9.60 | 10.60 |
| 231.2002256 | 200.00 | 225.00 | 16.00 | 17.00 |
| 231.2002259 | 200.00 | 225.00 | 19.00 | 20.00 |
| 231.2002302 | 200.00 | 230.00 | 24.00 | 25.00 |
| 231.2202502 | 220.00 | 250.00 | 24.00 | 25.00 |
| 231.2502802 | 250.00 | 280.00 | 24.00 | 25.00 |
| 231.2803102 | 280.00 | 310.00 | 24.00 | 25.00 |
| 231.3203603 | 320.00 | 360.00 | 31.00 | 32.00 |
| 231.3604003 | 360.00 | 400.00 | 31.00 | 32.00 |

The figures highlighted in bold correspond to the dimensions for standard ISO 5597, with the rod diameters in line with standard ISO 3320. Other intermediate sizes can be provided.