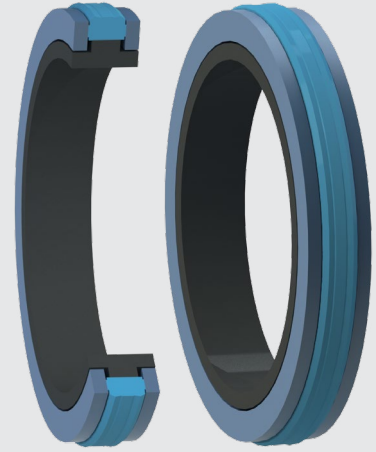


# PISTON SEALS BECA 513



## DESCRIPTION

The BECA 513 profile is a high-performing, double acting compact piston seal composed of a dynamic polyurethane friction ring, flexible pre-tightened NBR ring and two POM back-up rings.

## ADVANTAGES

- Very good sealing effect
- Increase in possible extrusion gaps
- Excellent extrusion resistance even during pressure peaks
- Excellent abrasion resistance
- Assembled by deformation

## APPLICATIONS

- Mobile hydraulics
- Hydraulic cylinders

## MATERIALS

### Profiled seal

NBR 80 Shore A

### Friction ring

PU 93 Shore A - Blue

PU 96 Shore A - Blue

High temp. PU 96 Shore A - Beige

### Back-up rings

Polyoxymethylene - POM

## TECHNICAL DATA

Temperature	-30°C / +100°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

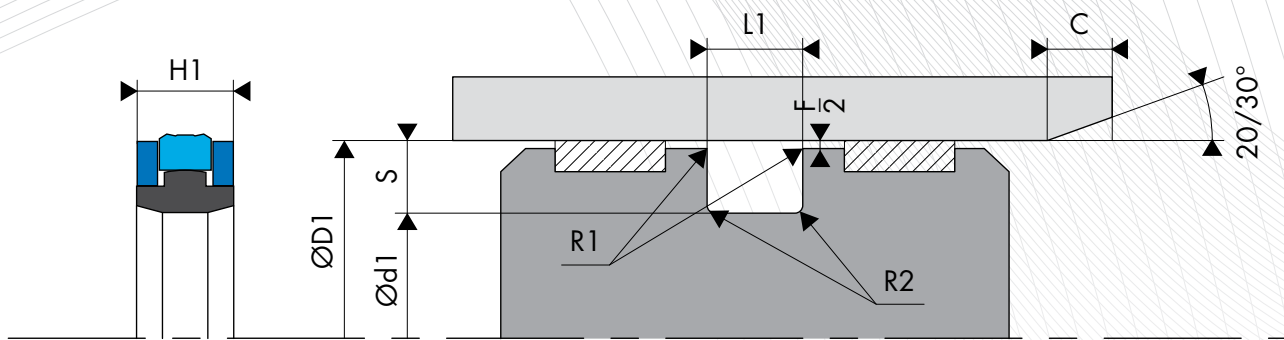
Pressure MPa	Radial gap F/2
10 MPa	0.50
25 MPa	0.50
35 MPa	0.40
40 MPa	0.30

## 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
5.00	0.20	0.70	2.50
7.50	0.20	1.20	5.00
11.50	0.20	1.80	8.00
14.00	0.20	2.50	10.00



**DIMENSIONS**

Part number	Bore diameter ØD1 H9	Groove diameter Ød1 h9	Seal height H1	Groove width L1 0/+0.20
513.050	<b>50.00</b>	<b>36.00</b>	<b>8.50</b>	<b>9.00</b>
513.060	60.00	46.00	8.50	9.00
<b>513.063</b>	<b>63.00</b>	<b>48.00</b>	<b>10.50</b>	<b>11.00</b>
513.065	65.00	50.00	10.50	11.00
<b>513.070</b>	<b>70.00</b>	<b>55.00</b>	<b>10.50</b>	<b>11.00</b>
513.075	75.00	60.00	10.50	11.00
<b>513.080</b>	<b>80.00</b>	<b>65.00</b>	<b>10.50</b>	<b>11.00</b>
513.085	85.00	70.00	10.50	11.00
<b>513.090</b>	<b>90.00</b>	<b>75.00</b>	<b>10.50</b>	<b>11.00</b>
513.095	95.00	80.00	10.50	11.00
<b>513.100</b>	<b>100.00</b>	<b>85.00</b>	<b>12.00</b>	<b>12.50</b>
513.105	105.00	90.00	12.00	12.50
<b>513.110</b>	<b>110.00</b>	<b>95.00</b>	<b>12.00</b>	<b>12.50</b>
513.115	115.00	100.00	12.00	12.50
513.120	120.00	105.00	12.00	12.50
<b>513.125</b>	<b>125.00</b>	<b>102.00</b>	<b>15.50</b>	<b>16.00</b>
513.130	130.00	107.00	15.50	16.00
513.135	135.00	112.00	15.50	16.00
<b>513.140</b>	<b>140.00</b>	<b>117.00</b>	<b>15.50</b>	<b>16.00</b>

Part number	Bore diameter ØD1 H9	Groove diameter Ød1 h9	Seal height H1	Groove width L1 0/+0.20
513.150	150.00	127.00	15.50	16.00
<b>513.160</b>	<b>160.00</b>	<b>137.00</b>	<b>15.50</b>	<b>16.00</b>
513.170	170.00	147.00	15.50	16.00
<b>513.180</b>	<b>180.00</b>	<b>157.00</b>	<b>15.50</b>	<b>16.00</b>
513.185	185.00	162.00	15.50	16.00
513.190	190.00	167.00	15.50	16.00
<b>513.200</b>	<b>200.00</b>	<b>177.00</b>	<b>15.50</b>	<b>16.00</b>
513.210	210.00	187.00	15.50	16.00
<b>513.220</b>	<b>220.00</b>	<b>197.00</b>	<b>15.50</b>	<b>16.00</b>
513.225	225.00	202.00	15.50	16.00
513.230	230.00	207.00	15.50	16.00
513.240	240.00	217.00	15.50	16.00
<b>513.250</b>	<b>250.00</b>	<b>222.00</b>	<b>17.00</b>	<b>17.50</b>
513.260	260.00	232.00	17.00	17.50
513.270	270.00	242.00	17.00	17.50
<b>513.280</b>	<b>280.00</b>	<b>252.00</b>	<b>17.00</b>	<b>17.50</b>
513.300	300.00	272.00	17.00	17.50
<b>513.320</b>	<b>320.00</b>	<b>292.00</b>	<b>17.00</b>	<b>17.50</b>

The figures highlighted in bold correspond to the bore diameters that are recommended by standard ISO 3320. Other intermediate sizes can be provided.