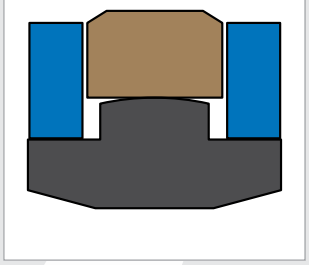
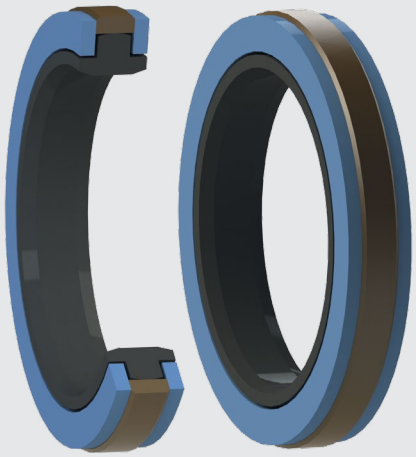


PISTON SEALS

BECA 512



DESCRIPTION

The BECA 512 profile is a high-performing, double acting compact piston seal composed of a dynamic bronze-filled PTFE friction ring, flexible pre-tightened NBR ring and two POM back-up rings.

ADVANTAGES

Low friction coefficient; no stick-slip 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

FKM 80 Shore A

Friction ring

Bronze-filled PTFE

Back-up rings

Polyoxymethylene - POM

Other grades of materials are available. Please refer to the materials table on the next page.

TECHNICAL DATA

Temperature	-30°C / +115°C depending on the material selected
Pressure	50 MPa
Speed	1.5 m/s
Media	Mineral hydraulic oils Glycol/oil emulsions Water/oil

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
50 MPa	0.30

SURFACE ROUGHNESS

Roughness	Dynamic surface area	Static surface area	Groove flanks
Ra	0.05 - 0.2 µm	≤1.6 µm	≤3.2 µm
Rz	0.4 - 1.6 µm	≤6.3 µm	≤10.0 µm
Rmax	0.63 - 2.5 µm	≤10.0 µm	≤16.0 µm

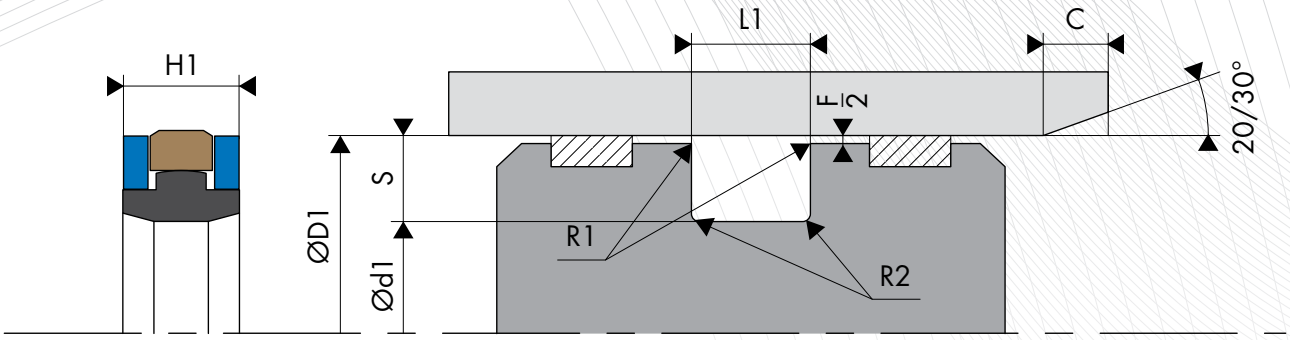
CHAMFERS AND RADIUS

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

TABLE MATERIALS

Friction ring			Flexible ring			Mating surface material
Standard code	Type of material	Colour	Code	Type of material	Service temperature	
DB	PTFE + 60% Bronze	Dark brown	K8	NBR 80 Shore A	-30°C/+100°C	Steel Chrome steel Cast iron
			G8	FKM 80 Shore A	-20°C / +115°C*	

Other grades of materials are available depending on your specificities.
** Temperature limited due to the combination of polyoxymethylene (POM) back-up rings*



EXAMPLE OF CODIFICATION

STANDARD CODIFICATION

Materials _____ : Friction ring, PTFE + 60% Bronze - Code DB
_____ : NBR 80 Shore A profiled seal - Code K8
_____ **:** Polyoxymethylene (POM) back-up ring - Code HC
Bore diameter ____ : ØD1 = 50.00 mm
Groove diameter __ : Ød1 + 36.00 mm
Part number_____ : 512. 050DBK8

Part number - 512. 050 DB K8

Family
Bore diameter
Friction ring material*
Profiled seal material*

* The codes that define the materials are set out in the materials table on the previous page.

DIMENSIONS

Part number	Bore diameter ØD1 H9	Groove diameter Ød1 h9	Seal height H1	Groove width L1 0/+0.20
512.040	**40.00**	**30.00**	**8.50**	**9.00**
512.045	**45.00**	**35.00**	**8.50**	**9.00**
512.050	**50.00**	**36.00**	**8.50**	**9.00**
512.S55	55.00	41.00	8.50	9.00
512.060	60.00	46.00	8.50	9.00
512.063	**63.00**	**48.00**	**10.50**	**11.00**
512.065	65.00	50.00	10.50	11.00
512.070	**70.00**	**55.00**	**10.50**	**11.00**
512.S75	75.00	60.00	10.50	11.00
512.080	**80.00**	**65.00**	**10.50**	**11.00**
512.085	85.00	70.00	10.50	11.00
512.090	**90.00**	**75.00**	**10.50**	**11.00**
512.095	95.00	80.00	10.50	11.00
512.100	**100.00**	**85.00**	**12.00**	**12.50**
512.105	105.00	90.00	12.00	12.50
512.110	**110.00**	**95.00**	**12.00**	**12.50**
512.115	115.00	100.00	12.00	12.50
512.120	120.00	105.00	12.00	12.50
512.125	**125.00**	**102.00**	**15.50**	**16.00**
512.130	130.00	107.00	15.50	16.00
512.S130	130.00	116.00	17.00	17.50
512.135	135.00	112.00	15.50	16.00

Part number	Bore diameter ØD1 H9	Groove diameter Ød1 h9	Seal height H1	Groove width L1 0/+0.20
512.S140	**140.00**	**115.00**	**15.50**	**16.00**
512.140	**140.00**	**117.00**	**15.50**	**16.00**
512.150	150.00	127.00	15.50	16.00
512.S150	150.00	134.00	15.50	16.00
512.160	**160.00**	**137.00**	**15.50**	**16.00**
512.170	170.00	147.00	15.50	16.00
512.180	**180.00**	**157.00**	**15.50**	**16.00**
512.185	185.00	162.00	15.50	16.00
512.190	190.00	167.00	15.50	16.00
512.200	**200.00**	**177.00**	**15.50**	**16.00**
512.2210	210.00	187.00	15.50	16.00
512.2220	**220.00**	**197.00**	**15.50**	**16.00**
512.225	225.00	202.00	15.50	16.00
512.2230	230.00	207.00	15.50	16.00
512.2240	240.00	217.00	15.50	16.00
512.2250	**250.00**	**222.00**	**17.00**	**17.50**
512.2260	260.00	232.00	17.00	17.50
512.2270	270.00	242.00	17.00	17.50
512.280	**280.00**	**252.00**	**17.00**	**17.50**
512.2300	300.00	272.00	17.00	17.50
512.2320	**320.00**	**292.00**	**17.00**	**17.50**

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

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