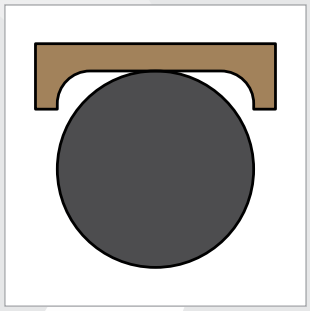


PISTON SEALS
BECA 550-559

DESCRIPTION

The BECA 550-559 profiles are double acting composite piston seals composed of a filled PTFE friction ring and pre-tightened rubber O'Ring.

ADVANTAGES

Suitable for a reduced size

Low friction coefficient; no stick-slip effect

Excellent extrusion and wear resistance

Wide temperature range and excellent chemical resistance, depending on the material selected for the O'Ring

APPLICATIONS

Shock absorbers

Distributor

Standard cylinders

MATERIALS

Friction ring

Bronze-filled PTFE

Carbon-filled PTFE

Virgin PTFE

O'Ring

NBR 70 Shore A

HNBR 70 Shore A

EPDM 70 Shore A

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

TECHNICAL DATA

Temperature	-30°C / +200°C
Pressure	1.6 MPa
Speed	5 m/s
Media	Lubricated air Oil-free air Non-aggressive gases

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

EXTRUSION GAPS

Radial section S	Radial gap F/2
	0.0 to 5.0 MPa
1.45	0.10
2.25	0.20
3.10	0.25
4.70	0.35
6.10	0.50
7.50	0.60

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

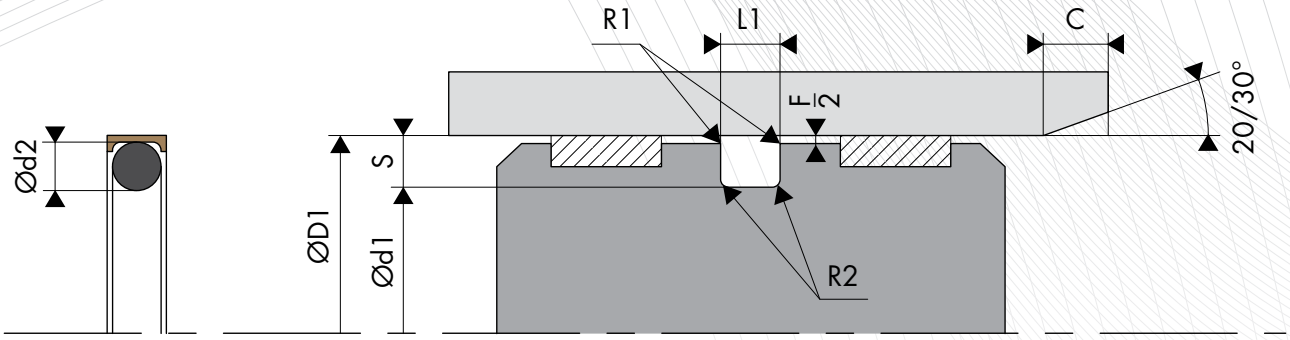
CHAMFERS AND RADIUS

Radial section S	Radius R1	Radius R2	Chamfer C
1.45	0.30	0.40	2.00
2.25	0.30	0.40	2.00
3.10	0.30	0.60	3.00
4.70	0.30	0.80	3.00
6.10	0.30	0.80	5.00
7.50	0.30	1.00	6.00

TABLE MATERIALS

Friction ring					O'Ring			Mating surface material
Standard code	ISO code	Material	Colour	Characteristics	Code	Type of material	Service temperature	
DP	P	Virgin PTFE	White	Resistance to chemical products Impermeability Dielectric Non-stick Low friction coefficient Food industry	K6	NBR 70 Shore A	-30°C/+100°C	Steel Stainless steel Chrome steel Aluminium Bronze Cast iron Treated surface
					G6	FKM 70 Shore A	-20°C/+200°C	
					C6	EPDM 70 Shore A	-45°C/+150°C	
					F6	VMQ 70 Shore A	-60°C/+200°C	
DC	C	PTFE + 25% Carbon	Grey	**Improvements** **• Wear properties** **• Compression set** Good resistance to chemical products Thermal and electrical conductivity Anti-static High-performing in compression-based dynamic applications	K6	NBR 70 Shore A	-30°C/+100°C	
					G6	FKM 70 Shore A	-20°C/+200°C	
					C6	EPDM 70 Shore A	-45°C/+150°C	
CG	C	PTFE + 23% Carbon + 2% Graphite	Black		K6	NBR 70 Shore A	-30°C/+100°C	
					G6	FKM 70 Shore A	-20°C/+200°C	
					C6	EPDM 70 Shore A	-45°C/+150°C	
DV	V	PTFE + 25 % Glass	Blue	**Improvements** **• Wear properties** **• Mechanical strength** Slightly more abrasive, however, this is corrected by adding MOS2 Maintains its chemical and dielectric properties Well-suited to applications with rotational and simultaneous alternating movements	K6	NBR 70 Shore A	-30°C/+100°C	Steel Chrome steel Cast iron
					G6	FKM 70 Shore A	-20°C/+200°C	
VM	M	PTFE + 15 % Glass + 5% MOS2	Grey		K6	NBR 70 Shore A	-30°C/+100°C	
					G6	FKM 70 Shore A	-20°C/+200°C	
DX	X	PTFE GL Blue + Glass + Metal oxides	Turquoise blue	Resistance to compression Resistance to wear Excellent chemical stability Good thermal conductivity	K6	NBR 70 Shore A	-30°C/+100°C	
					G6	FKM 70 Shore A	-20°C/+200°C	
DG	G	PTFE + 15% Graphite	Black	**Improvements** **• Wear properties** Reduced wear on metal parts Self-lubricating Thermal and electrical conductivity Low permeability Good friction coefficient Anti-static High performing in dynamic self-lubricating applications	K6	NBR 70 Shore A	-30°C/+100°C	Steel Stainless steel Chrome steel Aluminium Bronze Cast iron Treated surface
					G6	FKM 70 Shore A	-20°C/+200°C	
					C6	EPDM 70 Shore A	-45°C/+150°C	
K1	K	PTFE + 10% Ekonol	Light brown	**Improvements** **• Better abrasion resistance** **• Better dimensional stability at high temperatures** Use up to +300°C Good friction coefficient and low permeability	K6	NBR 70 Shore A	-30°C/+100°C	
					G6	FKM 70 Shore A	-20°C/+200°C	
					C6	EPDM 70 Shore A	-45°C/+150°C	
K2	K	PTFE + 20% Ekonol	Light brown		K6	NBR 70 Shore A	-30°C/+100°C	
					G6	FKM 70 Shore A	-20°C/+200°C	
					C6	EPDM 70 Shore A	-45°C/+150°C	
DB	B	PTFE + 60% Bronze	Dark brown	**Improvements** **• Wear properties** **• Warping resistance and creep strength** **• Compression resistance** Self-lubricating Electrical and thermal conductivity Does not alter the metal parts Reduced hold with certain chemical products Used for high-compression dynamic seals and has a low level of wear	K6	NBR 70 Shore A	-30°C/+100°C	Steel Chrome steel Cast iron
					G6	FKM 70 Shore A	-20°C/+200°C	
B4	B	PTFE + 40% Bronze	Dark brown		K6	NBR 70 Shore A	-30°C/+100°C	
					G6	FKM 70 Shore A	-20°C/+200°C	
HG	HG	PE-UHMW	White or off-white	Excellent wear resistance on contact with water and air	K6	NBR 70 Shore A	-30°C/+80°C	Steel Stainless steel Chrome steel Aluminium Bronze Cast iron Treated surface

Other grades of materials are available depending on your specificities.



INSTALLATION DIMENSIONS

Bore diameter ØD1 H9		Groove diameter	Groove width	Radial section	O'Ring cross-section
BECA 550 Standard range	**BECA 559 Extended range**	**Ød1 h9**	**L1 0/+0.20**	**S**	**Ød2**
5.0 - 13.9	5.0 - 139.9	D1 - 2.90	2.40	1.45	1.78
14.0 - 24.9	8.0 - 259.9	D1 - 4.50	3.60	2.25	2.62
25.0 - 45.9	12.0 - 469.9	D1 - 6.20	4.80	3.10	3.53
46.0 - 124.9	20.0 - 669.9	D1 - 9.40	7.10	4.70	5.33
125.0 - 669.9	80.0 - 999.9	D1 - 12.20	9.50	6.10	6.99
670.0 - 999.9	125.0 - 999.9	D1 - 15.00	10.00	7.50	8.40

EXAMPLE OF CODIFICATION

STANDARD CODIFICATION

Materials _____ : Friction ring, PTFE + 60% Bronze - Code DB
_____ : NBR 70 Shore A O'Ring - Code K6
Bore diameter ____ : ØD1 = 50.00 mm
Groove diameter __ : Ød1 + 40.60 mm
Part number_____ : 550. 050DBK6

Part number - 550. 050 DB K6

- Family
- Bore diameter
- Friction ring material*
- O'Ring 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	Groove width L1 0/+0.20
550.008	8.00	5.10	2.40
550.009	9.00	6.10	2.40
550.010	10.00	7.10	2.40
550.012	12.00	9.10	2.40
550.014	14.00	9.50	3.60
550.015	15.00	10.50	3.60
550.016	16.00	11.50	3.60
550.018	18.00	13.50	3.60
550.020	20.00	15.50	3.60
550.022	22.00	17.50	3.60
550.025	25.00	18.80	4.80
550.028	28.00	21.80	4.80
550.030	30.00	23.80	4.80
550.032	32.00	25.80	4.80
550.035	35.00	28.80	4.80
550.038	38.00	28.60	7.10
550.040	40.00	33.80	4.80
550.042	42.00	35.80	4.80
550.045	45.00	38.80	4.80
550.048	48.00	38.60	7.10
550.050	50.00	40.60	7.10
550.052	52.00	42.60	7.10
550.055	55.00	45.60	7.10
550.058	58.00	48.60	7.10
550.060	60.00	50.60	7.10
550.062	62.00	52.60	7.10
550.063	63.00	53.60	7.10
550.065	65.00	55.60	7.10
550.070	70.00	60.60	7.10
550.072	72.00	62.60	7.10
550.075	75.00	65.60	7.10
550.078	78.00	68.60	7.10
550.080	80.00	70.60	7.10
550.082	82.00	72.60	7.10
550.085	85.00	75.60	7.10
550.090	90.00	80.60	7.10
550.095	95.00	85.60	7.10
550.100	100.00	90.60	7.10
550.105	105.00	95.60	7.10
550.110	110.00	100.60	7.10
550.115	115.00	105.60	7.10
550.120	120.00	110.60	7.10
550.125	125.00	112.80	9.50

Part number	Bore diameter ØD1 H9	Groove diameter Ød1 h9	Groove width L1 0/+0.20
550.130	130.00	117.80	9.50
550.135	135.00	122.80	9.50
550.140	140.00	127.80	9.50
550.145	145.00	132.80	9.50
550.150	150.00	137.80	9.50
550.155	155.00	142.80	9.50
550.160	160.00	147.80	9.50
550.165	165.00	152.80	9.50
550.170	170.00	157.80	9.50
550.175	175.00	162.80	9.50
550.180	180.00	167.80	9.50
550.190	190.00	177.80	9.50
550.200	200.00	187.80	9.50
550.210	210.00	197.80	9.50
550.220	220.00	207.80	9.50
550.230	230.00	217.80	9.50
550.240	240.00	227.80	9.50
550.250	250.00	237.80	9.50
550.260	260.00	247.80	9.50
550.270	270.00	257.80	9.50
550.280	280.00	267.80	9.50
550.290	290.00	277.80	9.50
550.300	300.00	287.80	9.50
550.310	310.00	297.80	9.50
550.320	320.00	307.80	9.50
550.330	330.00	317.80	9.50
550.340	340.00	327.80	9.50
550.350	350.00	337.80	9.50
550.360	360.00	347.80	9.50
550.370	370.00	357.80	9.50
550.380	380.00	367.80	9.50
550.390	390.00	377.80	9.50
550.400	400.00	387.80	9.50
550.410	410.00	397.80	9.50
550.420	420.00	407.80	9.50
550.430	430.00	417.80	9.50
550.440	440.00	427.80	9.50
550.450	450.00	437.80	9.50
550.460	460.00	447.80	9.50
550.470	470.00	457.80	9.50
550.480	480.00	467.80	9.50
550.490	490.00	477.80	9.50
550.500	500.00	487.80	9.50