

ROD SEALS BECA 640



DESCRIPTION

The BECA 640 profile is a double acting composite rod seal composed of a rubber O'Ring or square ring and a polyamide friction ring.

ADVANTAGES

The square ring does not twist
 Low friction coefficient
 Excellent extrusion resistance
 Compatible with hydraulic oils

APPLICATIONS

Agriculture
 Mobile machinery
 Hydraulic cylinders

MATERIALS

Friction ring

Polyamide PA6

O'Ring or square ring

NBR 70 Shore A

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

TECHNICAL DATA

Temperature	-30°C / +100°C
Pressure	40 MPa
Speed	0.5 m/sec
Media	Mineral hydraulic oils Fire-resistant liquids Biocompatible fluids Water Others (contact our experts)

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

EXTRUSION GAPS

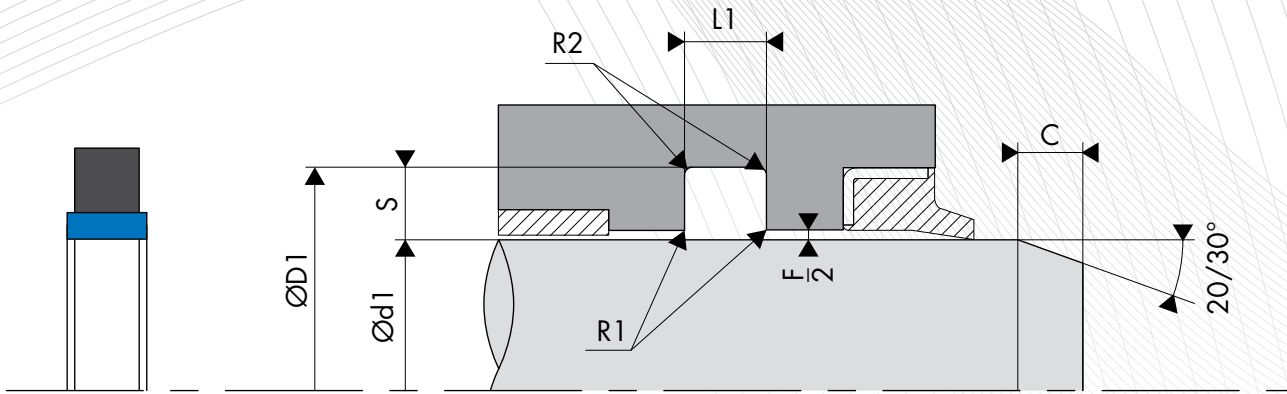
Pressure MPa	Radial gap F/2
20 MPa	0.25
35 MPa	0.20
40 MPa	0.15

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
1.30	0.30	0.10	2.00
2.00	0.30	0.20	2.00
2.60	0.30	0.20	2.00
3.25	0.30	0.20	3.00
3.90	0.30	0.20	3.00
4.55	0.30	0.20	4.00
5.20	0.30	0.30	4.50
5.85	0.30	0.30	5.00
6.50	0.30	0.40	5.50
7.80	0.30	0.40	6.00
10.40	0.30	0.60	8.00
13.00	0.30	0.80	10.00



○ INSTALLATION DIMENSIONS

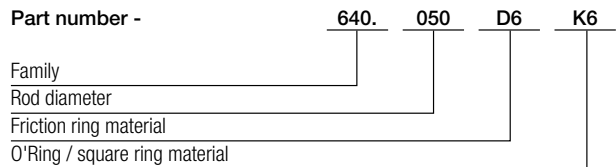
Rod diameter	Groove diameter	Groove width	Radial section	Cross-section
Ød1 f8	ØD1 H9	L1 0/+0.20	S	Ød2
3.0 - 11.9	d1 + 2.60	1.35	1.30	1.00
12.0 - 23.9	d1 + 4.00	2.00	2.00	1.78
24.0 - 33.9	d1 + 5.20	2.60	2.60	2.00
34.0 - 45.9	d1 + 6.50	3.20	3.25	2.62
46.0 - 58.9	d1 + 7.80	3.85	3.90	3.00
59.0 - 80.9	d1 + 9.10	4.50	4.55	3.53
81.0 - 129.9	d1 + 10.20	5.10	5.20	4.00
130.0 - 199.9	d1 + 11.70	5.70	5.85	5.00
200.0 - 299.9	d1 + 13.00	6.35	6.50	5.33
300.0 - 399.9	d1 + 15.60	7.60	7.80	6.99
400.0 - 599.9	d1 + 20.80	10.10	10.40	8.40
600.0 - **	d1 + 26.00	12.60	13.00	12.00

For special applications > 40 MPa, we recommend using an H8/f8 tolerance (groove/rod) or selecting other, more suitable materials. Please contact our experts.

○ EXAMPLE OF CODIFICATION

STANDARD CODIFICATION

Materials _____ : Polyamide friction ring - D6
 _____ : NBR 70 Shore A O'Ring / square ring - Code K6
Rod diameter _____ : Ød1 = 50.00 mm
Groove diameter _____ : ØD1 = 57.80 mm
Part number _____ : 640.050D6K6



DIMENSIONS

Part number	Rod diameter Ød1 f8	Groove diameter ØD1 H9	Groove width L1 0/+0.10
640.003	3.00	5.60	1.35
640.004	4.00	6.60	1.35
640.005	5.00	7.60	1.35
640.006	6.00	8.60	1.35
640.007	7.00	9.60	1.35
640.008	8.00	10.60	1.35
640.009	9.00	11.60	1.35
640.010	10.00	12.60	1.35
640.011	11.00	13.60	1.35
640.012	12.00	16.00	2.00
640.013	13.00	17.00	2.00
640.014	14.00	18.00	2.00
640.015	15.00	19.00	2.00
640.016	16.00	20.00	2.00
640.017	17.00	21.00	2.00
640.018	18.00	22.00	2.00
640.019	19.00	23.00	2.00
640.020	20.00	24.00	2.00
640.021	21.00	25.00	2.00
640.022	22.00	26.00	2.00
640.024	24.00	29.20	2.60
640.025	25.00	30.20	2.60
640.026	26.00	31.20	2.60
640.027	27.00	32.20	2.60
640.028	28.00	33.20	2.60
640.029	29.00	34.20	2.60
640.030	30.00	35.20	2.60
640.032	32.00	37.20	2.60
640.034	34.00	40.50	3.20
640.035	35.00	41.50	3.20
640.036	36.00	42.50	3.20
640.038	38.00	44.50	3.20
640.039	39.00	45.50	3.20
640.040	40.00	46.50	3.20
640.041	41.00	47.50	3.20
640.042	42.00	48.50	3.20
640.044	44.00	50.50	3.20
640.045	45.00	51.50	3.20
640.046	46.00	53.80	3.85
640.047	47.00	54.80	3.85
640.048	48.00	55.80	3.85
640.050	50.00	57.80	3.85
640.051	51.00	58.80	3.85
640.052	52.00	59.80	3.85
640.055	55.00	62.80	3.85
640.056	56.00	63.80	3.85
640.058	58.00	65.80	3.85
640.060	60.00	69.10	4.50
640.061	61.00	70.10	4.50
640.062	62.00	71.10	4.50
640.063	63.00	72.10	4.50
640.065	65.00	74.10	4.50
640.067	67.00	76.10	4.50
640.068	68.00	77.10	4.50
640.070	70.00	79.10	4.50
640.072	72.00	81.10	4.50
640.075	75.00	84.10	4.50
640.078	78.00	87.10	4.50
640.079	79.00	88.10	4.50
640.080	80.00	89.10	4.50
640.081	81.00	91.40	5.10
640.082	82.00	92.40	5.10
640.083	83.00	93.40	5.10
640.084	84.00	94.40	5.10
640.085	85.00	95.40	5.10
640.086	86.00	96.40	5.10

Part number	Rod diameter Ød1 f8	Groove diameter ØD1 H9	Groove width L1 0/+0.10
640.088	88.00	98.40	5.10
640.090	90.00	100.40	5.10
640.092	92.00	102.40	5.10
640.095	95.00	105.40	5.10
640.098	98.00	108.40	5.10
640.100	100.00	110.40	5.10
640.105	105.00	115.40	5.10
640.108	108.00	118.40	5.10
640.110	110.00	120.40	5.10
640.115	115.00	125.40	5.10
640.120	120.00	130.40	5.10
640.125	125.00	135.40	5.10
640.127	127.00	137.40	5.10
640.130	130.00	141.70	5.70
640.135	135.00	146.70	5.70
640.138	138.00	149.70	5.70
640.140	140.00	151.70	5.70
640.145	145.00	156.70	5.70
640.150	150.00	161.70	5.70
640.155	155.00	166.70	5.70
640.160	160.00	171.70	5.70
640.165	165.00	176.70	5.70
640.170	170.00	181.70	5.70
640.175	175.00	186.70	5.70
640.180	180.00	191.70	5.70
640.185	185.00	196.70	5.70
640.190	190.00	201.70	5.70
640.195	195.00	206.70	5.70
640.200	200.00	213.00	6.35
640.210	210.00	223.00	6.35
640.215	215.00	228.00	6.35
640.220	220.00	233.00	6.35
640.230	230.00	243.00	6.35
640.240	240.00	253.00	6.35
640.250	250.00	263.00	6.35
640.260	260.00	273.00	6.35
640.270	270.00	283.00	6.35
640.275	275.00	288.00	6.35
640.280	280.00	293.00	6.35
640.285	285.00	298.00	6.35
640.290	290.00	303.00	6.35
640.295	295.00	308.00	6.35
640.300	300.00	315.60	7.60
640.305	305.00	320.60	7.60
640.310	310.00	325.60	7.60
640.320	320.00	335.60	7.60
640.330	330.00	345.60	7.60
640.340	340.00	355.60	7.60
640.350	350.00	365.60	7.60
640.360	360.00	375.60	7.60
640.370	370.00	385.60	7.60
640.380	380.00	395.60	7.60
640.390	390.00	405.60	7.60
640.400	400.00	420.80	10.10
640.410	410.00	430.80	10.10
640.420	420.00	440.80	10.10
640.430	430.00	450.80	10.10
640.440	440.00	460.80	10.10
640.450	450.00	470.80	10.10
640.460	460.00	480.80	10.10
640.470	470.00	490.80	10.10
640.480	480.00	500.80	10.10
640.490	490.00	510.80	10.10
640.500	500.00	520.80	10.10

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