

# PISTON SEALS BECA 540



## DESCRIPTION

The BECA 540 profile is a single acting piston seal composed of a profiled, filled PTFE U-ring type seal and a V-spring that is resistant to corrosion. It meets the standards MIL-G-5514F and AS4716.

## ADVANTAGES

- Wide temperature range and excellent chemical resistance
- Low friction coefficient; no stick-slip effect
- Excellent abrasion resistance
- Good dimensional stability
- Non-toxic material

## APPLICATIONS

- Actuators
- Brakes systems
- Flight controls
- Engine systems
- Landing gear

## MATERIALS

### Profiled seal

- Carbon-filled PTFE
- PE-UHMW

### Spring

- Stainless steel

## TECHNICAL DATA

<b>Temperature</b>	-200°C / +260°C
<b>Pressure</b>	30 MPa
<b>Speed</b>	15 m/s
<b>Media</b>	Mineral hydraulic oils Fire-resistant liquids Biocompatible fluids Water Others (contact our experts)

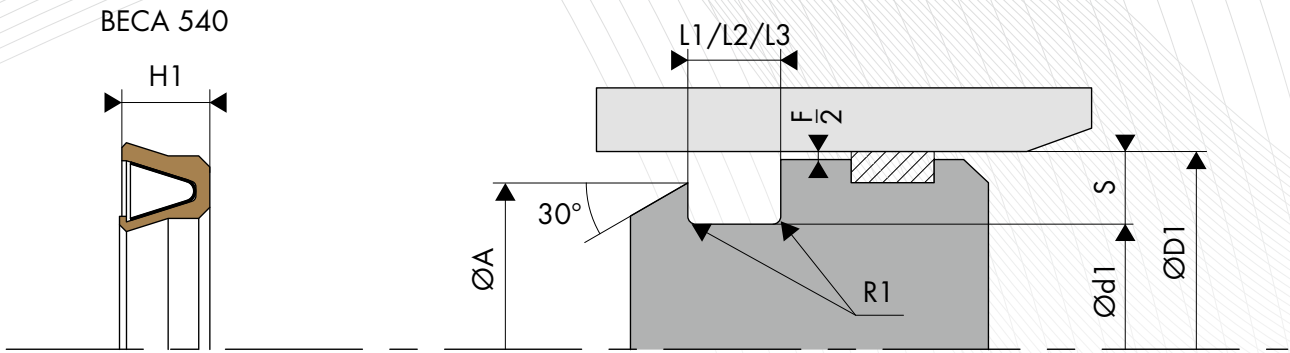
The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.

## 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

Series	Radius		Height of the step ØD1 - ØA	Chamfer C
	R1 min - max	R2 min - max		
010 - 028	0.13 - 0.26	0.13 - 0.38	0.40	2.00
110 - 149	0.13 - 0.26	0.13 - 0.38	0.60	2.50
210 - 222	0.13 - 0.26	0.13 - 0.38	0.70	3.00
223 - 247	0.13 - 0.26	0.25 - 0.64	0.70	3.50
325 - 349	0.13 - 0.26	0.51 - 0.89	0.80	4.00
425 - 460	0.13 - 0.26	0.51 - 0.89	0.90	4.50



○ GROOVE WIDTHS AND EXTRUSION GAPS

Series	Groove width			Extrusion gaps F
	L1 min - max	L2 min - max	L3 min - max	
010 - 012	2.39 - 2.52	3.81 - 4.06	5.26 - 5.51	0.10
013 - 028	2.39 - 2.52	3.81 - 4.06	5.26 - 5.51	0.13
110 - 128	3.58 - 3.83	4.65 - 4.90	6.22 - 6.47	0.13
129 - 140	3.58 - 3.83	4.65 - 4.90	6.22 - 6.47	0.15
141 - 149	3.58 - 3.83	4.65 - 4.90	6.22 - 6.47	0.18
210 - 223	4.78 - 5.03	5.97 - 6.22	7.72 - 7.97	0.13
224 - 227	4.78 - 5.03	5.97 - 6.22	7.72 - 7.97	0.15
228 - 243	4.78 - 5.03	5.97 - 6.22	7.72 - 7.97	0.18
244 - 247	4.78 - 5.03	5.97 - 6.22	7.72 - 7.97	0.20
325 - 329	7.14 - 7.39	8.48 - 8.73	10.77 - 11.02	0.15
330 - 345	7.14 - 7.39	8.48 - 8.73	10.77 - 11.02	0.18
346 - 349	7.14 - 7.39	8.48 - 8.73	10.77 - 11.02	0.20
425 - 445	9.53 - 9.78	12.07 - 12.32	14.71 - 14.96	0.23
446	9.53 - 9.78	12.07 - 12.32	14.71 - 14.96	0.25
447 - 460	9.53 - 9.78	12.07 - 12.32	14.71 - 14.96	0.28

○ TOLERANCES ON THE BORE DIAMETERS AND GROOVE DIAMETERS

Series	Tolerance on bore diameter ØD1	Tolerance on groove diameter Ød1
010 - 012	0/+0.025	-0.025/0
013 - 349	0/+0.050	-0.050/0
425 - 446	0/+0.076	-0.076/0
447 - 460	0/+0.100	-0.076/0

 DIMENSIONS

Part number	Series	Bore diameter		Groove diameter		Groove width		
		AS4716 / MIL-G-5514		AS4716	MIL-G-5514	0 BAE	1 BAE	2 BAE
		ØD1		Ød1	Ød1	L1 min	L2 min	L3 min
540.A010	010	9.14		6.35	6.30	2.39	3.78	5.26
540.A011	011	10.72		7.92	7.87	2.39	3.78	5.26
540.A012	012	12.32		9.53	9.47	2.39	3.78	5.26
540.A013	013	13.97		11.20	11.13	2.39	3.78	5.26
540.A014	014	15.57		12.80	12.73	2.39	3.78	5.26
540.A015	015	17.15		14.38	14.30	2.39	3.78	5.26
540.A016	016	18.75		15.98	15.90	2.39	3.78	5.26
540.A017	017	20.32		17.55	17.48	2.39	3.78	5.26
540.A018	018	21.92		19.13	19.08	2.39	3.78	5.26
540.A019	019	23.50		20.70	20.65	2.39	3.78	5.26
540.A020	020	25.17		22.38	22.33	2.39	3.78	5.26
540.A021	021	26.75		23.95	23.90	2.39	3.78	5.26
540.A022	022	28.35		25.55	25.50	2.39	3.78	5.26
540.A023	023	29.92		27.13	27.08	2.39	3.78	5.26
540.A024	024	31.52		28.73	28.68	2.39	3.78	5.26
540.A025	025	33.10		30.30	30.25	2.39	3.78	5.26
540.A026	026	34.70		31.90	31.85	2.39	3.78	5.26
540.A027	027	36.27		33.48	33.43	2.39	3.78	5.26
540.A028	028	37.87		35.08	35.03	2.39	3.78	5.26
540.A110	110	13.97		9.63	9.45	3.58	4.65	6.22
540.A111	111	15.57		11.20	11.05	3.58	4.65	6.22
540.A112	112	17.15		12.75	12.62	3.58	4.65	6.22
540.A113	113	18.75		14.35	14.22	3.58	4.65	6.22
540.A114	114	20.32		15.93	15.80	3.58	4.65	6.22
540.A115	115	21.92		17.50	17.40	3.58	4.65	6.22
540.A116	116	23.50		19.06	18.97	3.58	4.65	6.22
540.A117	117	25.17		20.75	20.65	3.58	4.65	6.22
540.A118	118	26.75		22.33	22.23	3.58	4.65	6.22
540.A119	119	28.35		23.93	22.83	3.58	4.65	6.22
540.A120	120	29.92		25.48	25.40	3.58	4.65	6.22
540.A121	121	31.52		27.08	27.00	3.58	4.65	6.22
540.A122	122	33.10		28.65	28.58	3.58	4.65	6.22
540.A123	123	34.70		30.25	30.18	3.58	4.65	6.22
540.A124	124	36.27		31.83	31.75	3.58	4.65	6.22
540.A125	125	37.87		33.43	33.35	3.58	4.65	6.22
540.A126	126	39.45		35.00	34.93	3.58	4.65	6.22
540.A127	127	41.05		36.60	36.53	3.58	4.65	6.22
540.A128	128	42.62		38.18	38.10	3.58	4.65	6.22
540.A129	129	44.22		39.78	39.70	3.58	4.65	6.22
540.A130	130	45.85		41.43	41.33	3.58	4.65	6.22
540.A131	131	47.42		43.00	42.90	3.58	4.65	6.22
540.A132	132	49.02		44.60	44.50	3.58	4.65	6.22
540.A133	133	50.60		46.18	46.08	3.58	4.65	6.22
540.A134	134	52.20		47.78	47.68	3.58	4.65	6.22
540.A135	135	53.80		49.38	49.28	3.58	4.65	6.22
540.A136	136	55.37		50.95	50.85	3.58	4.65	6.22
540.A137	137	56.97		52.55	52.45	3.58	4.65	6.22
540.A138	138	58.55		54.13	54.03	3.58	4.65	6.22
540.A139	139	60.15		55.73	55.63	3.58	4.65	6.22
540.A140	140	61.72		57.30	57.20	3.58	4.65	6.22
540.A141	141	63.32		58.90	58.80	3.58	4.65	6.22
540.A142	142	64.90		60.48	60.38	3.58	4.65	6.22
540.A143	143	66.50		62.08	61.98	3.58	4.65	6.22
540.A144	144	68.07		63.65	63.55	3.58	4.65	6.22
540.A145	145	69.67		65.25	63.15	3.58	4.65	6.22
540.A146	146	71.25		66.83	66.73	3.58	4.65	6.22
540.A147	147	72.85		68.43	68.33	3.58	4.65	6.22
540.A148	148	74.42		70.00	69.90	3.58	4.65	6.22
540.A149	149	76.02		71.60	71.50	3.58	4.65	6.22
540.A210	210	25.17		19.05	19.00	4.78	5.97	7.72
540.A211	211	26.75		20.62	20.57	4.78	5.97	7.72

Part number	Series	Bore diameter	Groove diameter		Groove width		
		AS4716 / MIL-G-5514	AS4716	MIL-G-5514	0 BAE	1 BAE	2 BAE
		ØD1	Ød1	Ød1	L1 min	L2 min	L3 min
540.A212	212	28.35	22.20	22.17	4.78	5.97	7.72
540.A213	213	29.92	23.77	23.75	4.78	5.97	7.72
540.A214	214	31.52	25.37	25.35	4.78	5.97	7.72
540.A215	215	33.10	27.03	26.92	4.78	5.97	7.72
540.A216	216	34.70	25.55	28.52	4.78	5.97	7.72
540.A217	217	36.27	30.12	30.10	4.78	5.97	7.72
540.A218	218	37.87	31.72	31.70	4.78	5.97	7.72
540.A219	219	39.45	33.30	33.27	4.78	5.97	7.72
540.A220	220	41.05	34.90	34.87	4.78	5.97	7.72
540.A221	221	42.62	36.47	36.45	4.78	5.97	7.72
540.A222	222	44.22	38.07	38.05	4.78	5.97	7.72
540.A223	223	47.42	41.28	41.25	4.78	5.97	7.72
540.A224	224	50.60	44.45	44.42	4.78	5.97	7.72
540.A225	225	53.80	47.65	47.63	4.78	5.97	7.72
540.A226	226	56.97	50.83	50.80	4.78	5.97	7.72
540.A227	227	60.15	54.00	53.98	4.78	5.97	7.72
540.A228	228	63.32	57.18	57.15	4.78	5.97	7.72
540.A229	229	66.50	60.35	60.33	4.78	5.97	7.72
540.A230	230	69.67	63.53	63.50	4.78	5.97	7.72
540.A231	231	72.85	66.70	66.68	4.78	5.97	7.72
540.A232	232	76.02	69.88	69.85	4.78	5.97	7.72
540.A233	233	79.20	73.05	73.03	4.78	5.97	7.72
540.A234	234	82.37	76.23	76.20	4.78	5.97	7.72
540.A235	235	85.55	79.40	79.38	4.78	5.97	7.72
540.A236	236	88.72	82.58	82.55	4.78	5.97	7.72
540.A237	237	91.90	85.75	85.73	4.78	5.97	7.72
540.A238	238	95.07	88.93	88.93	4.78	5.97	7.72
540.A239	239	98.25	92.10	92.10	4.78	5.97	7.72
540.A240	240	101.42	95.28	95.28	4.78	5.97	7.72
540.A241	241	104.60	98.45	98.45	4.78	5.97	7.72
540.A242	242	107.77	101.63	101.63	4.78	5.97	7.72
540.A243	243	110.95	104.80	104.80	4.78	5.97	7.72
540.A244	244	114.12	107.98	107.98	4.78	5.97	7.72
540.A245	245	117.30	111.15	111.15	4.78	5.97	7.72
540.A246	246	120.47	114.33	114.33	4.78	5.97	7.72
540.A247	247	123.65	117.50	117.50	4.78	5.97	7.72
540.A325	325	47.42	37.97	37.97	7.14	8.48	10.77
540.A326	326	50.60	41.15	41.15	7.14	8.48	10.77
540.A327	327	53.80	44.35	44.35	7.14	8.48	10.77
540.A328	328	56.97	47.52	47.52	7.14	8.48	10.77
540.A329	329	60.15	50.70	50.70	7.14	8.48	10.77
540.A330	330	63.32	53.87	53.87	7.14	8.48	10.77
540.A331	331	66.50	57.05	57.05	7.14	8.48	10.77
540.A332	332	69.67	60.22	60.22	7.14	8.48	10.77
540.A333	333	72.85	63.40	63.40	7.14	8.48	10.77
540.A334	334	76.02	66.57	66.57	7.14	8.48	10.77
540.A335	335	79.20	69.75	69.75	7.14	8.48	10.77
540.A336	336	82.37	72.92	72.92	7.14	8.48	10.77
540.A337	337	85.55	76.10	76.10	7.14	8.48	10.77
540.A338	338	88.72	79.27	79.27	7.14	8.48	10.77
540.A339	339	91.90	82.45	82.45	7.14	8.48	10.77
540.A340	340	95.07	85.62	85.62	7.14	8.48	10.77
540.A341	341	98.25	88.80	88.80	7.14	8.48	10.77
540.A342	342	101.42	91.97	91.97	7.14	8.48	10.77
540.A343	343	104.60	95.15	95.15	7.14	8.48	10.77
540.A344	344	107.77	98.32	98.32	7.14	8.48	10.77
540.A345	345	110.95	101.50	101.50	7.14	8.48	10.77
540.A346	346	114.12	104.67	104.67	7.14	8.48	10.77
540.A347	347	117.30	107.85	107.85	7.14	8.48	10.77
540.A348	348	120.47	111.02	111.02	7.14	8.48	10.77
540.A349	349	123.65	114.20	114.20	7.14	8.48	10.77

Part number	Series	Bore diameter	Groove diameter		Groove width		
		AS4716 / MIL-G-5514	AS4716	MIL-G-5514	0 BAE	1 BAE	2 BAE
		ØD1	Ød1	Ød1	L1 min	L2 min	L3 min
540.A425	425	126.34	114.22	114.22	9.53	12.07	14.71
540.A426	426	129.51	117.40	117.40	9.53	12.07	14.71
540.A427	427	132.69	120.57	120.57	9.53	12.07	14.71
540.A428	428	135.86	123.75	123.75	9.53	12.07	14.71
540.A429	429	139.04	126.92	126.92	9.53	12.07	14.71
540.A430	430	142.21	130.10	130.10	9.53	12.07	14.71
540.A431	431	145.39	133.27	133.27	9.53	12.07	14.71
540.A432	432	148.56	136.45	136.45	9.53	12.07	14.71
540.A433	433	151.74	139.62	139.62	9.53	12.07	14.71
540.A434	434	154.91	142.80	142.80	9.53	12.07	14.71
540.A435	435	158.09	145.97	145.97	9.53	12.07	14.71
540.A436	436	161.26	149.15	149.15	9.53	12.07	14.71
540.A437	437	164.44	152.32	152.32	9.53	12.07	14.71
540.A438	438	170.79	158.67	158.67	9.53	12.07	14.71
540.A439	439	177.14	165.02	165.02	9.53	12.07	14.71
540.A440	440	183.49	171.37	171.37	9.53	12.07	14.71
540.A441	441	189.84	177.72	177.72	9.53	12.07	14.71
540.A442	442	196.19	184.07	184.07	9.53	12.07	14.71
540.A443	443	202.54	190.47	190.42	9.53	12.07	14.71
540.A444	444	208.89	196.77	196.77	9.53	12.07	14.71
540.A445	445	215.24	203.12	203.12	9.53	12.07	14.71
540.A446	446	227.94	215.82	215.82	9.53	12.07	14.71
540.A447	447	240.64	228.52	228.52	9.53	12.07	14.71
540.A448	448	253.34	241.22	241.22	9.53	12.07	14.71
540.A449	449	266.04	253.92	253.92	9.53	12.07	14.71
540.A450	450	278.74	266.62	266.62	9.53	12.07	14.71
540.A451	451	291.44	279.32	279.32	9.53	12.07	14.71
540.A452	452	304.14	292.02	292.02	9.53	12.07	14.71
540.A453	453	316.84	304.72	304.72	9.53	12.07	14.71
540.A454	454	329.54	317.42	317.42	9.53	12.07	14.71
540.A455	455	342.24	330.12	330.12	9.53	12.07	14.71
540.A456	456	354.94	342.82	342.82	9.53	12.07	14.71
540.A457	457	367.64	355.52	355.52	9.53	12.07	14.71
540.A458	458	380.34	368.22	368.22	9.53	12.07	14.71
540.A459	459	393.04	380.92	380.92	9.53	12.07	14.71
540.A460	460	405.74	393.62	393.62	9.53	12.07	14.71