

PISTON SEALS

BECA 500



DESCRIPTION

The BECA 500 profile is a double acting composite piston seal composed of a filled PTFE friction ring and a pre-tightened rubber O'Ring. It follows the bore diameters, in line with the standards MIL-G-5514F and AS4716.

ADVANTAGES

Optimal sealing in static and dynamic applications

Low friction coefficient; no stick-slip effect

Excellent abrasion and extrusion resistance

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

APPLICATIONS

Actuators

Brakes systems

Flight controls

Engine systems

Landing gear

MATERIALS

Friction ring

Bronze-filled PTFE

Carbon-filled PTFE

Blue GL PTFE

O'Ring

NBR 70 Shore A

FKM 70 Shore A

TECHNICAL DATA

Temperature	-40°C / +200°C
Pressure	35 MPa
Speed	5 m/s
Media	Mineral oil-based hydraulic fluids Fire retardant hydraulic fluids Bio oils Phosphate esters Water

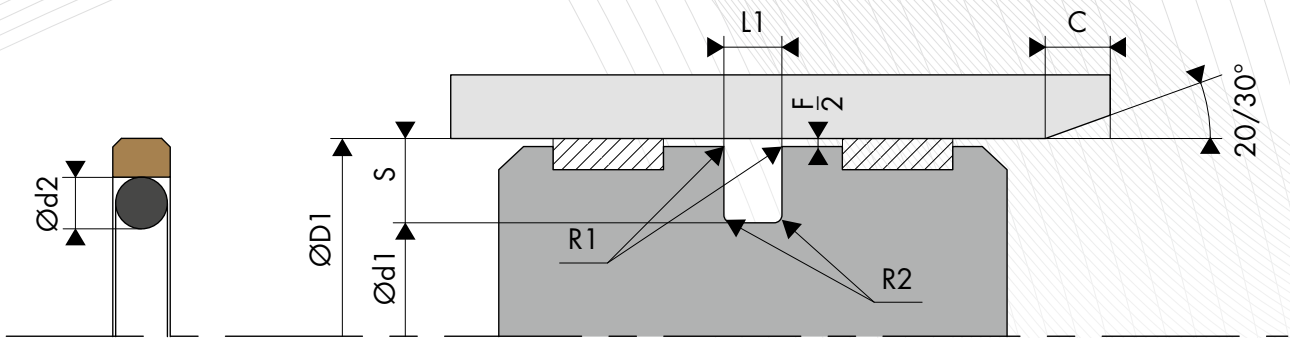
The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.

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

RADIUS AND CHAMFERS

Series	Radius		Chamfer C
	R1 min - max	R2 min - max	
010 - 149	0.13 - 0.26	0.13 - 0.38	3.00
210 - 247	0.13 - 0.26	0.25 - 0.64	4.00
325 - 460	0.13 - 0.26	0.50 - 0.73	5.00



○ GROOVE WIDTHS AND EXTRUSION GAPS

Series	Width L1 min - max	Extrusion gaps F	O'Ring cross-section Ød2
010 - 012	2.06 - 2.19	0.10	1.78
013 - 028	2.06 - 2.19	0.13	1.78
110 - 149	3.20 - 3.33	0.13	2.62
210 - 247	4.22 - 4.35	0.15	3.53
325 - 352	6.27 - 6.40	0.18	5.33
428 - 460	8.13 - 8.26	0.25	6.99

○ 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
350 - 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	O'Ring Series
		AS4716 / MIL-G-5514			
		ØD1	Ød1	L1 min	
500.A010	010	9.14	5.54	2.06	009
500.A011	011	10.72	6.30	2.06	010
500.A012	012	12.32	7.90	2.06	011
500.A013	013	13.97	9.55	2.06	012
500.A014	014	15.57	11.15	2.06	013
500.A015	015	17.15	12.73	2.06	014
500.A016	016	18.75	14.33	2.06	015
500.A017	017	20.32	15.90	2.06	016
500.A018	018	21.92	17.50	2.06	017
500.A019	019	23.50	19.08	2.06	018
500.A020	020	25.17	20.75	2.06	019
500.A021	021	26.75	22.33	2.06	020
500.A022	022	28.35	23.93	2.06	021
500.A023	023	29.92	25.50	2.06	022
500.A024	024	31.52	27.10	2.06	023
500.A025	025	33.10	28.68	2.06	024
500.A026	026	34.70	30.28	2.06	025
500.A027	027	36.27	31.85	2.06	026
500.A028	028	37.87	33.45	2.06	027
500.A110	110	13.97	7.62	3.20	028
500.A111	111	15.57	9.22	3.20	110
500.A112	112	17.15	10.80	3.20	111
500.A113	113	18.75	12.40	3.20	112
500.A114	114	20.32	13.97	3.20	113
500.A115	115	21.92	15.57	3.20	114
500.A116	116	23.50	17.15	3.20	115
500.A117	117	25.17	18.82	3.20	116
500.A118	118	26.75	20.40	3.20	117
500.A119	119	28.35	22.00	3.20	118
500.A120	120	29.92	23.57	3.20	119
500.A121	121	31.52	25.17	3.20	120
500.A122	122	33.10	26.75	3.20	121
500.A123	123	34.70	28.35	3.20	122
500.A124	124	36.27	29.92	3.20	123
500.A125	125	37.87	31.52	3.20	124
500.A126	126	39.45	33.10	3.20	125
500.A127	127	41.05	34.70	3.20	126
500.A128	128	42.62	36.27	3.20	127
500.A129	129	44.22	37.87	3.20	128
500.A130	130	45.85	39.50	3.20	129
500.A131	131	47.42	41.07	3.20	130
500.A132	132	49.02	42.67	3.20	131
500.A133	133	50.60	44.45	3.20	132
500.A134	134	52.20	45.85	3.20	133
500.A135	135	53.80	47.45	3.20	134
500.A136	136	55.37	49.02	3.20	135
500.A137	137	56.97	50.62	3.20	136
500.A138	138	58.55	52.20	3.20	137
500.A139	139	60.15	53.80	3.20	138
500.A140	140	61.72	55.37	3.20	139
500.A141	141	63.32	56.97	3.20	140
500.A142	142	64.90	58.55	3.20	141
500.A143	143	66.50	60.15	3.20	142
500.A144	144	68.07	61.72	3.20	143
500.A145	145	69.67	63.32	3.20	144
500.A146	146	71.25	64.90	3.20	145
500.A147	147	72.85	66.50	3.20	146
500.A148	148	74.42	68.07	3.20	147
500.A149	149	76.02	69.67	3.20	148
500.A210	210	25.17	15.67	4.22	149
500.A211	211	26.75	17.25	4.22	210

Part number	Series	Bore diameter	Groove diameter	Groove width	O'Ring Series
		AS4716 / MIL-G-5514			
		ØD1	Ød1	L1 min	
500.A212	212	28.35	18.85	4.22	211
500.A213	213	29.92	20.42	4.22	212
500.A214	214	31.52	22.02	4.22	213
500.A215	215	33.10	23.60	4.22	214
500.A216	216	34.70	25.20	4.22	215
500.A217	217	36.27	26.77	4.22	216
500.A218	218	37.87	28.37	4.22	217
500.A219	219	39.45	29.95	4.22	218
500.A220	220	41.05	31.55	4.22	219
500.A221	221	42.62	33.12	4.22	220
500.A222	222	44.22	34.72	4.22	221
500.A223	223	47.42	37.92	4.22	222
500.A224	224	50.60	41.10	4.22	223
500.A225	225	53.80	44.30	4.22	224
500.A226	226	56.97	47.47	4.22	225
500.A227	227	60.15	50.65	4.22	226
500.A228	228	63.32	53.82	4.22	227
500.A229	229	66.50	53.82	4.22	228
500.A230	230	69.67	60.17	4.22	229
500.A231	231	72.85	63.35	4.22	230
500.A232	232	76.02	66.52	4.22	231
500.A233	233	79.20	69.70	4.22	232
500.A234	234	82.37	72.87	4.22	233
500.A235	235	85.55	76.05	4.22	234
500.A236	236	88.72	79.22	4.22	235
500.A237	237	91.90	82.40	4.22	236
500.A238	238	95.07	85.57	4.22	237
500.A239	239	98.25	88.75	4.22	238
500.A240	240	101.42	91.92	4.22	239
500.A241	241	104.60	95.10	4.22	240
500.A242	242	107.77	98.27	4.22	241
500.A243	243	110.95	101.45	4.22	242
500.A244	244	114.12	104.62	4.22	243
500.A245	245	117.30	107.80	4.22	244
500.A246	246	120.47	110.97	4.22	245
500.A247	247	123.65	114.15	4.22	246
500.A325	325	47.42	33.35	6.27	247
500.A326	326	50.60	36.53	6.27	325
500.A327	327	53.80	39.73	6.27	326
500.A328	328	56.97	42.90	6.27	327
500.A329	329	60.15	46.08	6.27	328
500.A330	330	63.32	49.25	6.27	329
500.A331	331	66.50	52.43	6.27	330
500.A332	332	69.67	55.60	6.27	331
500.A333	333	72.85	58.78	6.27	332
500.A334	334	76.02	61.95	6.27	333
500.A335	335	79.20	65.13	6.27	334
500.A336	336	82.37	68.30	6.27	335
500.A337	337	85.55	71.48	6.27	336
500.A338	338	88.72	74.65	6.27	337
500.A339	339	91.90	77.83	6.27	338
500.A340	340	95.07	81.00	6.27	339
500.A341	341	98.25	84.18	6.27	340
500.A342	342	101.42	87.35	6.27	341
500.A343	343	104.60	90.53	6.27	342
500.A344	344	107.77	93.70	6.27	343
500.A345	345	110.95	96.88	6.27	344
500.A346	346	114.12	100.05	6.27	345
500.A347	347	117.30	103.23	6.27	346
500.A348	348	120.47	106.40	6.27	347
500.A349	349	123.65	109.58	6.27	348

Part number	Series	Bore diameter		Groove diameter	Groove width	O'Ring Series
		AS4716 / MIL-G-5514				
		ØD1		Ød1	L1 min	
500.A425	350	126.34		112.27	6.27	349
500.A426	351	129.51		115.44	6.27	350
500.A427	352	132.69		118.62	6.27	351
500.A428	428	135.86		116.81	8.13	352
500.A429	429	139.04		119.99	8.13	428
500.A430	430	142.21		126.16	8.13	429
500.A431	431	145.39		126.34	8.13	430
500.A432	432	148.56		129.51	8.13	431
500.A433	433	151.74		132.69	8.13	432
500.A434	434	154.91		135.86	8.13	433
500.A435	435	158.09		139.04	8.13	434
500.A436	436	161.26		142.21	8.13	435
500.A437	437	164.44		145.39	8.13	436
500.A438	438	170.79		151.74	8.13	437
500.A439	439	177.14		158.09	8.13	438
500.A440	440	183.49		164.44	8.13	439
500.A441	441	189.84		170.79	8.13	440
500.A442	442	196.19		177.14	8.13	441
500.A443	443	202.54		183.49	8.13	442
500.A444	444	208.89		189.84	8.13	443
500.A445	445	215.24		196.19	8.13	444
500.A446	446	227.94		208.89	8.13	445
500.A447	447	240.64		221.59	8.13	446
500.A448	448	253.34		234.29	8.13	447
500.A449	449	266.04		246.99	8.13	448
500.A450	450	278.74		259.69	8.13	449
500.A451	451	291.44		272.39	8.13	450
500.A452	452	304.14		285.09	8.13	451
500.A453	453	316.84		297.79	8.13	452
500.A454	454	329.54		310.49	8.13	453
500.A455	455	342.24		323.19	8.13	454
500.A456	456	354.94		335.89	8.13	455
500.A457	457	367.64		348.59	8.13	456
500.A458	458	380.34		361.29	8.13	457
500.A459	459	393.04		373.99	8.13	458
500.A460	460	405.74		386.69	8.13	459