

# ROD SEALS

## BECA 151



### DESCRIPTION

The BECA 151 profile is a double acting composite rod seal composed of a filled PTFE friction ring and a pre-tightened rubber O'Ring. It follows the rod 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

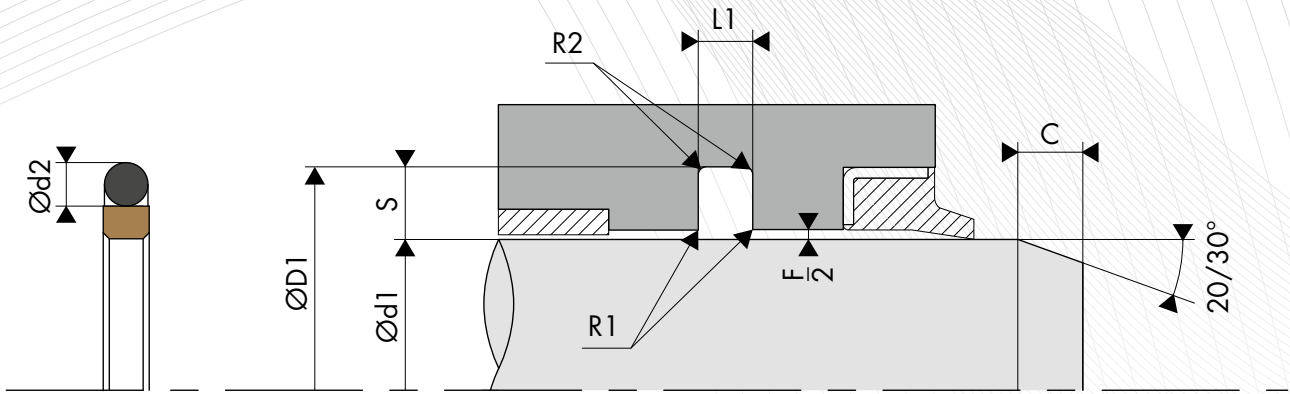
The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.

### 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 R1 min - max	Radius R2 min - max	Chamfer C
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	Groove 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 - 349	6.27 - 6.40	0.18	5.33
425 - 460	8.13 - 8.26	0.25	6.99

○ TOLERANCES ON THE ROD DIAMETERS AND GROOVE DIAMETERS

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

 DIMENSIONS

Part number	Series	Rod diameter		Groove diameter	Groove width	O'Ring Series
		AS4716 / MIL-G-5514				
		Ød1		ØD1	L1 min	
151.A010	010	6.30		10.72	2.06	011
151.A011	011	7.87		12.29	2.06	012
151.A012	012	9.47		13.89	2.06	013
151.A013	013	11.05		15.47	2.06	014
151.A014	014	12.65		17.07	2.06	015
151.A015	015	14.22		18.64	2.06	016
151.A016	016	15.82		20.24	2.06	017
151.A017	017	17.40		21.82	2.06	018
151.A018	018	19.00		23.42	2.06	019
151.A019	019	20.57		24.99	2.06	020
151.A020	020	22.17		26.59	2.06	021
151.A021	021	23.75		28.17	2.06	022
151.A022	022	25.35		29.77	2.06	023
151.A023	023	26.92		31.34	2.06	024
151.A024	024	28.52		32.94	2.06	025
151.A025	025	30.10		34.52	2.06	026
151.A026	026	31.70		36.12	2.06	027
151.A027	027	33.27		37.69	2.06	028
151.A028	028	34.87		39.29	2.06	110
151.A110	110	9.47		15.82	2.06	111
151.A111	111	11.05		17.40	2.06	112
151.A112	112	12.65		19.00	2.06	113
151.A113	113	14.22		20.57	2.06	114
151.A114	114	15.82		22.17	2.06	115
151.A115	115	17.40		23.75	2.06	116
151.A116	116	19.00		25.35	2.06	117
151.A117	117	20.57		26.92	2.06	118
151.A118	118	22.17		28.52	2.06	119
151.A119	119	23.75		30.10	2.06	120
151.A120	120	25.35		31.70	2.06	121
151.A121	121	26.92		33.27	2.06	122
151.A122	122	28.52		34.87	2.06	123
151.A123	123	30.10		36.45	2.06	124
151.A124	124	31.70		38.05	2.06	125
151.A125	125	33.27		39.62	2.06	126
151.A126	126	34.87		41.22	3.20	127
151.A127	127	36.45		42.80	3.20	128
151.A128	128	38.05		44.40	3.20	129
151.A129	129	39.62		45.97	3.20	130
151.A130	130	41.22		47.57	3.20	131
151.A131	131	42.80		49.15	3.20	132
151.A132	132	44.40		50.75	3.20	133
151.A133	133	45.97		52.32	3.20	134
151.A134	134	47.57		53.92	3.20	135
151.A135	135	49.17		55.52	3.20	136
151.A136	136	50.75		57.10	3.20	137
151.A137	137	52.35		58.70	3.20	138
151.A138	138	53.92		60.27	3.20	139
151.A139	139	55.52		61.87	3.20	140
151.A140	140	57.10		63.45	3.20	141
151.A141	141	58.70		65.05	3.20	142
151.A142	142	60.27		66.62	3.20	143
151.A143	143	61.87		68.22	3.20	144
151.A144	144	63.45		69.80	3.20	145
151.A145	145	65.05		71.40	3.20	146
151.A146	146	66.62		72.97	3.20	147
151.A147	147	68.22		74.57	3.20	148
151.A148	148	69.80		76.15	3.20	149
151.A149	149	71.40		77.75	3.20	210
151.A210	210	19.00		28.50	4.22	211
151.A211	211	20.57		30.07	4.22	212

Part number	Series	Rod diameter		Groove diameter	Groove width	O'Ring Series
		AS4716 / MIL-G-5514				
		Ød1		ØD1	L1 min	
151.A212	212	22.17		31.67	4.22	213
151.A213	213	23.75		33.25	4.22	214
151.A214	214	25.35		34.85	4.22	215
151.A215	215	26.92		36.42	4.22	216
151.A216	216	28.52		38.02	4.22	217
151.A217	217	30.10		39.60	4.22	218
151.A218	218	31.70		41.20	4.22	219
151.A219	219	33.27		42.77	4.22	220
151.A220	220	34.87		44.37	4.22	221
151.A221	221	36.45		45.95	4.22	222
151.A222	222	38.05		47.55	4.22	223
151.A223	223	41.22		50.72	4.22	224
151.A224	224	44.40		53.90	4.22	225
151.A225	225	47.57		57.07	4.22	226
151.A226	226	50.75		60.25	4.22	227
151.A227	227	53.92		63.42	4.22	228
151.A228	228	57.10		66.60	4.22	229
151.A229	229	60.27		69.77	4.22	230
151.A230	230	63.45		72.95	4.22	231
151.A231	231	66.62		76.12	4.22	232
151.A232	232	69.80		79.30	4.22	233
151.A233	233	72.97		82.47	4.22	234
151.A234	234	76.12		85.62	4.22	235
151.A235	235	79.30		88.80	4.22	236
151.A236	236	82.47		91.97	4.22	237
151.A237	237	85.65		95.15	4.22	238
151.A238	238	88.82		98.32	4.22	239
151.A239	239	92.00		101.50	4.22	240
151.A240	240	95.17		104.67	4.22	241
151.A241	241	98.35		107.85	4.22	242
151.A242	242	101.52		111.02	4.22	243
151.A243	243	104.70		114.20	4.22	244
151.A244	244	107.87		117.37	4.22	245
151.A245	245	111.05		120.55	4.22	246
151.A246	246	114.22		123.72	4.22	247
151.A247	247	117.40		126.90	4.22	325
151.A325	325	38.05		51.12	6.27	326
151.A326	326	41.22		55.30	6.27	327
151.A327	327	44.40		58.47	6.27	328
151.A328	328	47.57		61.65	6.27	329
151.A329	329	50.75		64.82	6.27	330
151.A330	330	53.92		68.00	6.27	331
151.A331	331	57.10		71.17	6.27	332
151.A332	332	60.27		74.35	6.27	333
151.A333	333	63.45		77.52	6.27	334
151.A334	334	66.62		80.70	6.27	335
151.A335	335	69.80		83.87	6.27	336
151.A336	336	72.97		87.05	6.27	337
151.A337	337	76.12		90.20	6.27	338
151.A338	338	79.30		93.37	6.27	339
151.A339	339	82.47		96.55	6.27	340
151.A340	340	85.65		99.72	6.27	341
151.A341	341	88.82		102.90	6.27	342
151.A342	342	92.00		106.07	6.27	343
151.A343	343	95.17		109.25	6.27	344
151.A344	344	98.35		112.42	6.27	345
151.A345	345	101.52		115.60	6.27	346
151.A346	346	104.70		118.77	6.27	347
151.A347	347	107.87		121.95	6.27	348
151.A348	348	111.05		125.12	6.27	349
151.A349	349	114.22		128.30	6.27	350

Part number	Series	Rod diameter		Groove diameter	Groove width	O'Ring Series
		AS4716 / MIL-G-5514				
		Ød1		ØD1	L1 min	
151.A425	425	114.22		133.27	8.13	427
151.A426	426	117.40		136.45	8.13	428
151.A427	427	120.57		139.00	8.13	429
151.A428	428	123.75		142.80	8.13	430
151.A429	429	126.92		145.97	8.13	431
151.A430	430	130.10		149.15	8.13	432
151.A431	431	133.27		152.32	8.13	433
151.A432	432	135.45		155.50	8.13	434
151.A433	433	139.62		158.67	8.13	435
151.A434	434	142.80		161.85	8.13	436
151.A435	435	145.97		165.02	8.13	437
151.A436	436	149.15		168.20	8.13	437
151.A437	437	152.32		171.37	8.13	438
151.A438	438	158.67		177.72	8.13	439
151.A439	439	165.02		184.07	8.13	440
151.A440	440	171.37		190.42	8.13	441
151.A441	441	177.72		196.77	8.13	442
151.A442	442	184.07		203.12	8.13	443
151.A443	443	190.42		209.47	8.13	444
151.A444	444	196.77		215.82	8.13	445
151.A445	445	203.12		222.17	8.13	445
151.A446	445	215.82		234.87	8.13	446
151.A447	446	228.52		247.57	8.13	447
151.A448	447	241.22		260.27	8.13	448
151.A449	448	253.92		272.97	8.13	449
151.A450	449	266.62		285.67	8.13	450
151.A451	450	279.32		298.37	8.13	451
151.A452	451	292.02		311.07	8.13	452
151.A453	452	304.72		323.77	8.13	453
151.A454	453	317.42		336.47	8.13	454
151.A455	454	330.12		349.17	8.13	455
151.A456	455	342.82		361.87	8.13	456
151.A457	456	355.52		374.57	8.13	457
151.A458	457	368.22		387.27	8.13	458
151.A459	458	380.92		399.97	8.13	459
151.A460	459	393.62		412.67	8.13	460

