

# ROD SEALS

## BECA 150



### DESCRIPTION

The BECA 150 profile is a single 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

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

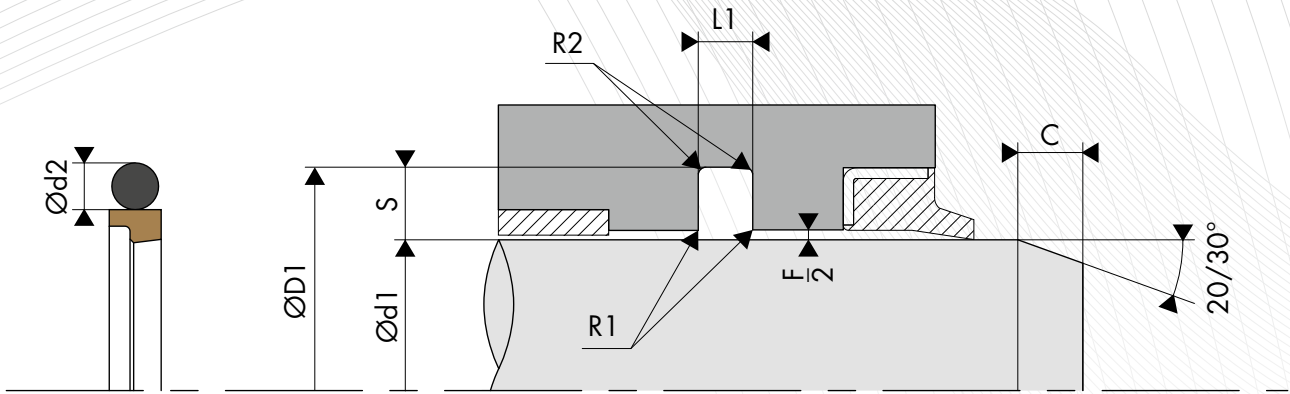
The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.

### 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 - 126	3.20 - 3.33	0.13	2.62
127 - 132	3.20 - 3.33	0.15	2.62
133 - 149	3.20 - 3.33	0.18	2.62
210 - 222	4.22 - 4.35	0.13	3.53
223 - 224	4.22 - 4.35	0.15	3.53
225 - 245	4.22 - 4.35	0.18	3.53
246 - 247	4.22 - 4.35	0.20	3.53
325 - 327	6.27 - 6.40	0.15	5.33
328 - 349	6.27 - 6.40	0.18	5.33
425 - 438	8.13 - 8.26	0.23	6.99
439 - 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	
150.A010	010	6.30		10.72	2.06	011
150.A011	011	7.87		12.29	2.06	012
150.A012	012	9.47		13.89	2.06	013
150.A013	013	11.05		15.47	2.06	014
150.A014	014	12.65		17.07	2.06	015
150.A015	015	14.22		18.64	2.06	016
150.A016	016	15.82		20.24	2.06	017
150.A017	017	17.40		21.82	2.06	018
150.A018	018	19.00		23.42	2.06	019
150.A019	019	20.57		24.99	2.06	020
150.A020	020	22.17		26.59	2.06	021
150.A021	021	23.75		28.17	2.06	022
150.A022	022	25.35		29.77	2.06	023
150.A023	023	26.92		31.34	2.06	024
150.A024	024	28.52		32.94	2.06	025
150.A025	025	30.10		34.52	2.06	026
150.A026	026	31.70		36.12	2.06	027
150.A027	027	33.27		37.69	2.06	028
150.A028	028	34.87		39.29	2.06	110
150.A110	110	9.47		15.82	2.06	111
150.A111	111	11.05		17.40	2.06	112
150.A112	112	12.65		19.00	2.06	113
150.A113	113	14.22		20.57	2.06	114
150.A114	114	15.82		22.17	2.06	115
150.A115	115	17.40		23.75	2.06	116
150.A116	116	19.00		25.35	2.06	117
150.A117	117	20.57		26.92	2.06	118
150.A118	118	22.17		28.52	2.06	119
150.A119	119	23.75		30.10	2.06	120
150.A120	120	25.35		31.70	2.06	121
150.A121	121	26.92		33.27	2.06	122
150.A122	122	28.52		34.87	2.06	123
150.A123	123	30.10		36.45	2.06	124
150.A124	124	31.70		38.05	2.06	125
150.A125	125	33.27		39.62	2.06	126
150.A126	126	34.87		41.22	3.20	127
150.A127	127	36.45		42.80	3.20	128
150.A128	128	38.05		44.40	3.20	129
150.A129	129	39.62		45.97	3.20	130
150.A130	130	41.22		47.57	3.20	131
150.A131	131	42.80		49.15	3.20	132
150.A132	132	44.40		50.75	3.20	133
150.A133	133	45.97		52.32	3.20	134
150.A134	134	47.57		53.92	3.20	135
150.A135	135	49.17		55.52	3.20	136
150.A136	136	50.75		57.10	3.20	137
150.A137	137	52.35		58.70	3.20	138
150.A138	138	53.92		60.27	3.20	139
150.A139	139	55.52		61.87	3.20	140
150.A140	140	57.10		63.45	3.20	141
150.A141	141	58.70		65.05	3.20	142
150.A142	142	60.27		66.62	3.20	143
150.A143	143	61.87		68.22	3.20	144
150.A144	144	63.45		69.80	3.20	145
150.A145	145	65.05		71.40	3.20	146
150.A146	146	66.62		72.97	3.20	147
150.A147	147	68.22		74.57	3.20	148
150.A148	148	69.80		76.15	3.20	149
150.A149	149	71.40		77.75	3.20	210
150.A210	210	19.00		28.50	4.22	211
150.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	
150.A212	212	22.17		31.67	4.22	213
150.A213	213	23.75		33.25	4.22	214
150.A214	214	25.35		34.85	4.22	215
150.A215	215	26.92		36.42	4.22	216
150.A216	216	28.52		38.02	4.22	217
150.A217	217	30.10		39.60	4.22	218
150.A218	218	31.70		41.20	4.22	219
150.A219	219	33.27		42.77	4.22	220
150.A220	220	34.87		44.37	4.22	221
150.A221	221	36.45		45.95	4.22	222
150.A222	222	38.05		47.55	4.22	223
150.A223	223	41.22		50.72	4.22	224
150.A224	224	44.40		53.90	4.22	225
150.A225	225	47.57		57.07	4.22	226
150.A226	226	50.75		60.25	4.22	227
150.A227	227	53.92		63.42	4.22	228
150.A228	228	57.10		66.60	4.22	229
150.A229	229	60.27		69.77	4.22	230
150.A230	230	63.45		72.95	4.22	231
150.A231	231	66.62		76.12	4.22	232
150.A232	232	69.80		79.30	4.22	233
150.A233	233	72.97		82.47	4.22	234
150.A234	234	76.12		85.62	4.22	235
150.A235	235	79.30		88.80	4.22	236
150.A236	236	82.47		91.97	4.22	237
150.A237	237	85.65		95.15	4.22	238
150.A238	238	88.82		98.32	4.22	239
150.A239	239	92.00		101.50	4.22	240
150.A240	240	95.17		104.67	4.22	241
150.A241	241	98.35		107.85	4.22	242
150.A242	242	101.52		111.02	4.22	243
150.A243	243	104.70		114.20	4.22	244
150.A244	244	107.87		117.37	4.22	245
150.A245	245	111.05		120.55	4.22	246
150.A246	246	114.22		123.72	4.22	247
150.A247	247	117.40		126.90	4.22	325
150.A325	325	38.05		51.12	6.27	326
150.A326	326	41.22		55.30	6.27	327
150.A327	327	44.40		58.47	6.27	328
150.A328	328	47.57		61.65	6.27	329
150.A329	329	50.75		64.82	6.27	330
150.A330	330	53.92		68.00	6.27	331
150.A331	331	57.10		71.17	6.27	332
150.A332	332	60.27		74.35	6.27	333
150.A333	333	63.45		77.52	6.27	334
150.A334	334	66.62		80.70	6.27	335
150.A335	335	69.80		83.87	6.27	336
150.A336	336	72.97		87.05	6.27	337
150.A337	337	76.12		90.20	6.27	338
150.A338	338	79.30		93.37	6.27	339
150.A339	339	82.47		96.55	6.27	340
150.A340	340	85.65		99.72	6.27	341
150.A341	341	88.82		102.90	6.27	342
150.A342	342	92.00		106.07	6.27	343
150.A343	343	95.17		109.25	6.27	344
150.A344	344	98.35		112.42	6.27	345
150.A345	345	101.52		115.60	6.27	346
150.A346	346	104.70		118.77	6.27	347
150.A347	347	107.87		121.95	6.27	348
150.A348	348	111.05		125.12	6.27	349
150.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	
150.A425	425	114.22	133.27	8.13	427
150.A426	426	117.40	136.45	8.13	428
150.A427	427	120.57	139.00	8.13	429
150.A428	428	123.75	142.80	8.13	430
150.A429	429	126.92	145.97	8.13	431
150.A430	430	130.10	149.15	8.13	432
150.A431	431	133.27	152.32	8.13	433
150.A432	432	135.45	155.50	8.13	434
150.A433	433	139.62	158.67	8.13	435
150.A434	434	142.80	161.85	8.13	436
150.A435	435	145.97	165.02	8.13	437
150.A436	436	149.15	168.20	8.13	437
150.A437	437	152.32	171.37	8.13	438
150.A438	438	158.67	177.72	8.13	439
150.A439	439	165.02	184.07	8.13	440
150.A440	440	171.37	190.42	8.13	441
150.A441	441	177.72	196.77	8.13	442
150.A442	442	184.07	203.12	8.13	443
150.A443	443	190.42	209.47	8.13	444
150.A444	444	196.77	215.82	8.13	445
150.A445	445	203.12	222.17	8.13	445
150.A446	446	215.82	234.87	8.13	446
150.A447	447	228.52	247.57	8.13	447
150.A448	448	241.22	260.27	8.13	448
150.A449	449	253.92	272.97	8.13	449
150.A450	450	266.62	285.67	8.13	450
150.A451	451	279.32	298.37	8.13	451
150.A452	452	292.02	311.07	8.13	452
150.A453	453	304.72	323.77	8.13	453
150.A454	454	317.42	336.47	8.13	454
150.A455	455	330.12	349.17	8.13	455
150.A456	456	342.82	361.87	8.13	456
150.A457	457	355.52	374.57	8.13	457
150.A458	458	368.22	387.27	8.13	458
150.A459	459	380.92	399.97	8.13	459
150.A460	460	393.62	412.67	8.13	460