

PISTON SEALS

BECA 508S

DESCRIPTION

The BECA 508S profile is a double acting composite piston seal composed of a filled PTFE friction ring, two static O'Rings and a dynamic rubber X'Ring. It follows the bore diameters, in line with the standards MIL-G-5514F and AS4716.

ADVANTAGES

Optimal sealing for separating two fluids
 Low friction coefficient;
 no stick-slip effect
 Excellent abrasion resistance
 Wide temperature range and excellent chemical resistance, depending on the material selected for the O'Rings

APPLICATIONS

Actuators
 Brakes systems
 Flight controls
 Engine systems
 Landing gear

MATERIALS

Friction ring

Bronze-filled PTFE
 Carbon-filled PTFE
 Blue GL PTFE

O'Rings

NBR 70 Shore A
 FKM 70 Shore A

X'Ring

NBR 70 Shore A
 FKM 70 Shore A

TECHNICAL DATA

Temperature	-40°C / +200°C
Pressure	35 MPa
Speed	3 m/s
Media	Mineral oil-based hydraulic fluids Fire retardant hydraulic fluids Bio oils Phosphate esters Water

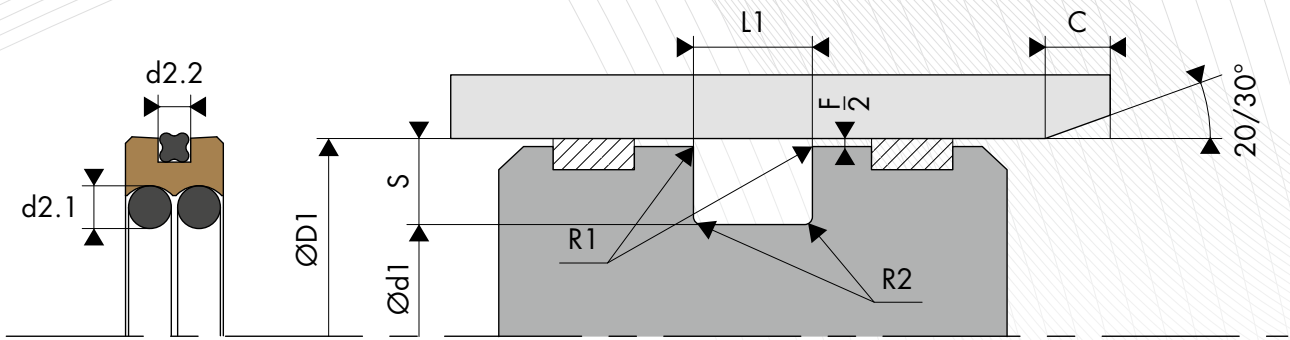
The figures above indicate the maximum values and may not be cumulated. They may be developed, depending on the materials used.

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	
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 Ød2.1	X'Ring cross-section Ød2.2
325 - 329	7.14 - 7.39	0.15	2.62	1.78
330 - 345	7.14 - 7.39	0.18	2.62	1.78
346 - 349	7.14 - 7.39	0.20	2.62	1.78
425 - 445	9.53 - 9.78	0.23	3.53	2.62
446	9.53 - 9.78	0.25	3.53	2.62
447 - 460	9.53 - 9.78	0.28	3.53	2.62

○ TOLERANCES ON THE BORE DIAMETERS AND GROOVE DIAMETERS

Series	Tolerance on bore diameter ØD1	Tolerance on groove diameter Ød1
325 - 460	0/+0.050	-0.050/0

DIMENSIONS

Part number	Series	Bore diameter		Groove diameter	Groove width	O'Ring Series	X'Ring Series
		AS4716 / MIL-G-5514					
		ØD1		Ød1	L1 min		
508.S325	325	47.42		37.97	7.14	128	031
508.S326	326	50.60		41.15	7.14	130	032
508.S327	327	53.80		44.35	7.14	132	033
508.S328	328	56.97		47.52	7.14	133	034
508.S329	329	60.15		50.70	7.14	135	035
508.S330	330	63.32		53.87	7.14	137	036
508.S331	331	66.50		57.05	7.14	139	037
508.S332	332	69.67		60.22	7.14	141	038
508.S333	333	72.85		63.40	7.14	143	039
508.S334	334	76.02		66.57	7.14	145	040
508.S335	335	79.20		69.75	7.14	147	041
508.S336	336	82.37		72.92	7.14	149	041
508.S337	337	85.55		76.10	7.14	151	042
508.S338	338	88.72		79.27	7.14	151	042
508.S339	339	91.90		82.45	7.14	152	043
508.S340	340	95.07		85.62	7.14	152	043
508.S341	341	98.25		88.80	7.14	153	044
508.S342	342	101.42		91.97	7.14	153	044
508.S343	343	104.60		95.15	7.14	154	045
508.S344	344	107.77		98.32	7.14	154	045
508.S345	345	110.95		101.50	7.14	155	046
508.S346	346	114.12		104.67	7.14	155	046
508.S347	347	117.30		107.85	7.14	156	047
508.S348	348	120.47		111.02	7.14	156	047
508.S349	349	123.65		114.20	7.14	157	048
508.S425	425	126.34		114.22	9.53	245	158
508.S426	426	129.51		117.40	9.53	246	158
508.S427	427	132.69		120.57	9.53	247	159
508.S428	428	135.86		123.75	9.53	248	159
508.S429	429	139.04		126.92	9.53	249	160
508.S430	430	142.21		130.10	9.53	250	160
508.S431	431	145.39		133.27	9.53	251	161
508.S432	432	148.56		136.45	9.53	252	161
508.S433	433	151.74		139.62	9.53	253	162
508.S434	434	154.91		142.80	9.53	254	162
508.S435	435	158.09		145.97	9.53	255	163
508.S436	436	161.26		149.15	9.53	256	163
508.S437	437	164.44		152.32	9.53	257	164
508.S438	438	170.79		158.67	9.53	259	165
508.S439	439	177.14		165.02	9.53	259	166
508.S440	440	183.49		171.37	9.53	260	167
508.S441	441	189.84		177.72	9.53	261	168
508.S442	442	196.19		184.07	9.53	262	169
508.S443	443	202.54		190.42	9.53	263	170
508.S444	444	208.89		196.77	9.53	264	171
508.S445	445	215.24		203.12	9.53	265	172
508.S446	446	227.94		215.82	9.53	267	174
508.S447	447	240.64		228.52	9.53	269	176
508.S448	448	253.34		241.22	9.53	271	178
508.S449	449	266.04		253.92	9.53	273	179
508.S450	450	278.74		266.62	9.53	275	180
508.S451	451	291.44		279.32	9.53	276	181
508.S452	452	304.14		292.02	9.53	277	182
508.S453	453	316.84		304.72	9.53	278	183
508.S454	454	329.54		317.42	9.53	278	184
508.S455	455	342.24		330.12	9.53	279	185
508.S456	456	354.94		342.82	9.53	279	186
508.S457	457	367.64		355.52	9.53	280	187
508.S458	458	380.34		368.22	9.53	280	188
508.S459	459	393.04		380.92	9.53	281	189
508.S460	460	405.74		393.62	9.53	281	190