

Piston Seal S5 Profile

Catalog EPS 5370/USA



S5 Profile, Square PTFE Cap Seal

The Parker S5 profile is a bi-directional piston seal for use in low to medium duty hydraulic actuators and is suitable for sealing against hardened surfaces in pneumatic applications. The S5 profile is a two piece design comprised of a standard size Parker O-ring energizing a glass-filled PTFE cap. The S5 profile offers long wear, low friction and because of its short assembly length requires minimal gland space on the piston. The seal is commonly used in applications such as agriculture hydraulics, mobile hydraulics, machine tools, and hydraulic presses. Parker's S5 profile will retrofit non-Parker seals of similar design and is an updated version of the Parker S5000 piston seal.

The S5 profile may be ordered without the energizer by omitting the energizer code. See part number nomenclature.

Technical Data

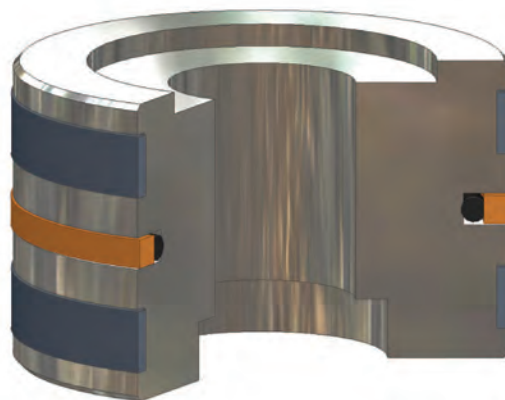
Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
Cap			
0203 15% fiberglass filled PTFE	-200°F to 575°F (-129°C to 302°C)	3500 psi (241 bar)	< 13 ft/s (4 m/sec)
Energizer			
A 70A Nitrile	-30°F to 250°F (-34°C to 121°C)		

***Alternate Materials:** For applications that may require an alternate material, please see Section 3 for alternate PTFE (Table 3-4) and energizer (Table 3-5) materials.

†Pressure Range without wear rings (see Table 2-4, page 2-5).



S5 Cross-Section



S5 installed in Piston Gland



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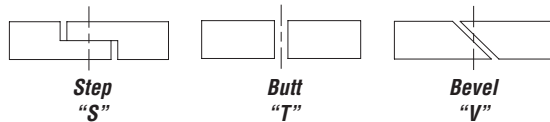
S5 Profile

Technical Data (Continued)

Options

Split Rings: To aid in installation, the PTFE ring can be supplied in one of the following split configurations. To indicate that the S5 profile is to be split, add the appropriate split type indicator to the end of the part number.

- S = Step Cut
- T = Butt Cut
- V = Bevel cut



Metric: To configure metric part numbering, see Table 7-34 on page 7-38, and call your local Parker Seal representative for availability.

Part Number Nomenclature — S5 Profile

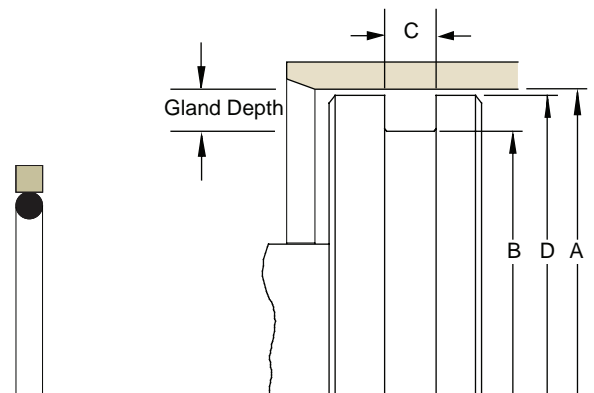
Table 7-32. S5 Profile — Inch

0	2	0	3	S5	1	9	6	0	3	5	0	0	-	1	2	9	A
Seal Compound 4-Digit Material Code Example: 0203 = 15% Fiberglass-filled PTFE				Profile	Gland Depth (x1000) Example: .196 X 1000 = 196				Bore Diameter (x1000) Example: 3.500 X 1000 = 03500					Groove Width (x1000) Example: .129 X 1000 = 129			Energizer Material Code A = 70A Nitrile Omit = No energizer See Table 3-5, page 3-18

Option: Split Ring Options
 S = Step Cut
 T = Butt Cut
 V = Bevel Cut

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Gland Dimensions — S5 Profile



Please refer to Engineering Section 2, Page 2-8 for surface finish and additional hardware considerations.

Table 7-33. S5 Gland Dimensions — Inch

A Bore Diameter	B Groove Diameter	C Groove Width	D Piston Diameter*	O-ring Dash Number	Part Number
+0.002/-0.000	+0.001/-0.001	+0.002/-0.002	+0.000/-0.002		
0.500	0.240	0.083	0.499	009	0203S513000500-083A
0.625	0.365	0.083	0.624	011	0203S513000625-083A
0.750	0.490	0.083	0.749	013	0203S513000750-083A

*If used with wear rings, refer to wear ring piston diameter, see Section 9.

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Table 7-33. S5 Gland Dimensions — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Groove Width	D Piston Diameter*	O-ring Dash Number	Part Number
+0.002/-0.000	+0.001/-0.001	+0.002/-0.002	+0.000/-0.002		
0.875	0.615	0.083	0.874	016	0203S513000875-083A
1.000	0.740	0.083	0.999	017	0203S513001000-083A
1.125	0.865	0.083	1.124	019	0203S513001125-083A
1.250	0.990	0.083	1.249	022	0203S513001250-083A
1.375	1.115	0.083	1.374	022	0203S513001375-083A
1.500	1.240	0.083	1.499	025	0203S513001500-083A
+0.002/-0.000	+0.002/-0.002	+0.002/-0.002	+0.000/-0.002		
1.625	1.233	0.122	1.624	123	0203S519601625-122A
1.750	1.358	0.122	1.749	125	0203S519601750-122A
1.875	1.483	0.122	1.874	127	0203S519601875-122A
+0.003/-0.000	+0.002/-0.002	+0.003/-0.003	+0.000/-0.003		
2.000	1.608	0.130	1.999	129	0203S519602000-130A
2.125	1.733	0.130	2.14	131	0203S519602125-130A
2.250	1.858	0.130	2.249	133	0203S519602250-130A
2.375	1.983	0.130	2.374	135	0203S519602375-130A
2.500	2.108	0.130	2.499	137	0203S519602500-130A
2.625	2.233	0.130	2.624	139	0203S519602625-130A
2.750	2.358	0.130	2.749	141	0203S519602750-130A
2.875	2.483	0.130	2.874	143	0203S519602875-130A
3.000	2.608	0.130	2.999	145	0203S519603000-130A
3.250	2.858	0.130	3.249	149	0203S519603250-130A
3.375	2.983	0.130	3.374	150	0203S519603375-130A
3.500	3.108	0.130	3.499	151	0203S519603500-130A
3.625	3.233	0.130	3.624	152	0203S519603625-130A
3.750	3.358	0.130	3.749	152	0203S519603750-130A
4.000	3.608	0.130	3.999	153	0203S519604000-130A
4.250	3.858	0.130	4.249	154	0203S519604250-130A
4.500	4.108	0.130	4.499	155	0203S519604500-130A
4.750	4.358	0.130	4.749	156	0203S519604750-130A
4.875	4.483	0.130	4.874	156	0203S519604875-130A
5.000	4.608	0.130	4.999	157	0203S519605000-130A
5.250	4.858	0.130	5.249	158	0203S519605250-130A
5.500	5.108	0.130	5.499	159	0203S519605500-130A
+0.004/-0.000	+0.003/-0.003	+0.004/-0.004	+0.000/-0.003		
5.750	5.232	0.160	5.748	251	0203S525905750-160A
5.875	5.357	0.160	5.873	252	0203S525905875-160A
6.000	5.482	0.160	5.998	253	0203S525906000-160A
6.250	5.732	0.160	6.248	255	0203S525906250-160A
6.500	5.982	0.160	6.498	257	0203S525906500-160A
6.750	6.232	0.160	6.748	258	0203S525906750-160A
7.000	6.482	0.160	6.998	259	0203S525907000-160A
7.125	6.607	0.160	7.123	260	0203S525907125-160A
7.250	6.732	0.160	7.248	260	0203S525907250-160A
7.500	6.982	0.160	7.498	261	0203S525907500-160A
7.750	7.232	0.160	7.748	262	0203S525907750-160A
8.000	7.482	0.160	7.998	263	0203S525908000-160A
8.250	7.732	0.160	8.248	264	0203S525908250-160A
8.500	7.982	0.160	8.498	265	0203S525908500-160A
8.750	8.232	0.160	8.748	266	0203S525908750-160A
9.000	8.482	0.160	8.998	267	0203S525909000-160A

*If used with wear rings, refer to wear ring piston diameter, see Section 9.

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Table 7-33. S5 Gland Dimensions — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Groove Width	D Piston Diameter*	O-ring Dash Number	Part Number
+ .004/-.000	+ .003/-.003	+ .004/-.004	+ .000/-.003		
9.250	8.732	0.160	9.248	268	0203S525909250-160A
9.500	8.982	0.160	9.498	269	0203S525909500-160A
9.750	9.232	0.160	9.748	270	0203S525909750-160A
10.000	9.482	0.160	9.998	271	0203S525910000-160A
10.250	9.732	0.160	10.248	272	0203S525910250-160A
10.500	9.982	0.160	10.498	273	0203S525910500-160A
10.750	10.232	0.160	10.748	274	0203S525910750-160A
11.000	10.482	0.160	10.998	275	0203S525911000-160A
11.500	10.982	0.160	11.498	276	0203S525911500-160A
12.000	11.482	0.160	11.998	277	0203S525912000-160A
12.500	11.982	0.160	12.498	278	0203S525912500-160A
13.000	12.482	0.160	12.998	278	0203S525913000-160A
14.000	13.482	0.160	13.998	279	0203S525914000-160A
15.000	14.482	0.160	14.998	280	0203S525915000-160A
16.000	15.482	0.160	15.998	281	0203S525916000-160A

*If used with wear rings, refer to wear ring piston diameter, see Section 9.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

Part Number Nomenclature — S5 Profile

Table 7-34. S5 Profile — Metric (mm)

