ON Profile, PTFE Rod Cap Seal

The Parker ON profile is a bi-directional PTFE rod seal for use in low to medium duty hydraulic systems. The ON profile is a simple two piece design comprised of a standard size Parker o-ring energizing a wear resistant PTFE cap. The ON profile offers long wear and low friction, and because of its short assembly length, requires minimal space in the rod housing. The seal is commonly used in applications such as mobile hydraulics, machine tools, injection molding machines and hydraulic presses. Parker's ON profile will retrofit non-Parker seals of similar design.

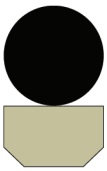
The ON profile may be ordered without the energizer by omitting the energizer code. See part number nomenclature.

Technical Data

Standard Materials*		Temperature Range	Pressure Range†	Surface Speed
Cap				
0401	40% bronze-filled PTFE	-200°F to 575°F (-129°C to 302°C)	5000 psi (344 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.

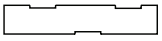
†**Pressure Range** without wear rings (see Table 2-4, page 2-5).

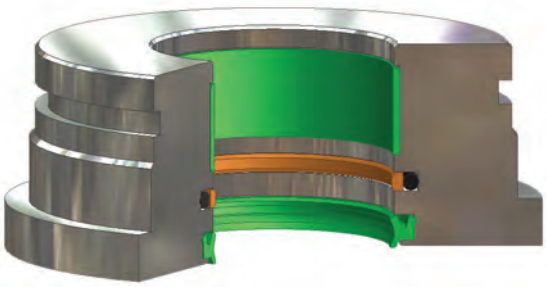


ON Cross-Section

Options

Notched side walls: Notches can be added to the side walls of the PTFE cap. This can help to optimize the seal's response to fluid pressure. Notched side walls help ensure that fluid pressure fills the cavity between the side face of the seal and the side face of the seal gland. Consult your local Parker Seal representative for the availability and cost to add side notches to the ON profile.

N = Notched walls 



ON installed in Rod Gland

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Part Number Nomenclature — ON Profile

Table 5-21. ON Profile — Inch

0	4	0	1	ON	1	4	9	0	2	0	0	0	-	1	2	6	A	N

Seal Compound
4-Digit Material Code
Example:
0401 = 40% Bronze-filled PTFE

Profile

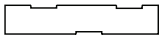
Gland Depth (x1000)
Example: .149 x 1000 = 149

Bore Diameter (x1000)
Example: 2.000 x 1000 = 02000

Groove Width (x1000)
Example: .126 x 1000 = 126

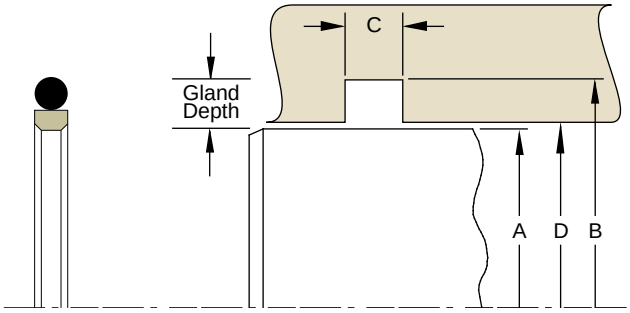
Energizer Compound Code
Example: A = 70A Nitrile
Omit = No energizer
See Table 3-5, page 3-18.

Option:
"N" = Notched walls



5

Gland Dimensions — ON Profile



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

Table 5-23. ON Profile — Inch

A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter*	O-ring Dash Number	Part Number
+.000/-.001	+.001/-.000	+.005/-.000	+.001/-.000		
0.500	0.674	0.081	0.501	015	**0401ON08700500-081A**
0.562	0.736	0.081	0.563	016	**0401ON08700562-081A**
0.625	0.799	0.081	0.626	017	**0401ON08700625-081A**
0.687	0.861	0.081	0.688	018	**0401ON08700687-081A**
0.750	0.924	0.081	0.751	019	**0401ON08700750-081A**
0.812	0.986	0.081	0.813	020	**0401ON08700812-081A**
0.875	1.049	0.081	0.876	021	**0401ON08700875-081A**
0.937	1.111	0.081	0.938	022	**0401ON08700937-081A**

*If used with wear rings, refer to wear ring throat diameter, see Section 9.
For custom groove calculations, see Appendix C.

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Table 5-23. ON Gland Dimensions — Inch

A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter*	O-ring Dash Number	Part Number
+.000/-.002	**+.002/-.000**	**+.005/-.000**	**+.002/-.000**		
1.000	1.298	0.126	1.001	122	**0401ON14901000-126A**
1.062	1.360	0.126	1.063	123	**0401ON14901062-126A**
1.125	1.423	0.126	1.126	124	**0401ON14901125-126A**
1.187	1.485	0.126	1.188	125	**0401ON14901187-126A**
1.250	1.548	0.126	1.251	126	**0401ON14901250-126A**
1.312	1.610	0.126	1.313	127	**0401ON14901312-126A**
1.375	1.673	0.126	1.376	128	**0401ON14901375-126A**
1.437	1.735	0.126	1.438	129	**0401ON14901437-126A**
1.500	1.798	0.126	1.501	130	**0401ON14901500-126A**
1.562	1.860	0.126	1.563	131	**0401ON14901562-126A**
1.625	1.923	0.126	1.626	132	**0401ON14901625-126A**
1.687	1.985	0.126	1.688	133	**0401ON14901687-126A**
1.750	2.048	0.126	1.751	134	**0401ON14901750-126A**
1.875	2.173	0.126	1.876	136	**0401ON14901875-126A**
+.000/-.003	**+.003/-.000**	**+.005/-.000**	**+.003/-.000**		
2.000	2.424	0.166	2.001	228	**0401ON21202000-166A**
2.125	2.549	0.166	2.126	228	**0401ON21202125-166A**
2.250	2.674	0.166	2.251	229	**0401ON21202250-166A**
2.375	2.799	0.166	2.376	230	**0401ON21202375-166A**
2.500	2.924	0.166	2.501	231	**0401ON21202500-166A**
2.625	3.049	0.166	2.626	232	**0401ON21202625-166A**
2.750	3.174	0.166	2.751	233	**0401ON21202750-166A**
2.875	3.299	0.166	2.876	234	**0401ON21202875-166A**
3.000	3.424	0.166	3.001	235	**0401ON21203000-166A**
3.125	3.549	0.166	3.126	236	**0401ON21203125-166A**
3.250	3.674	0.166	3.251	237	**0401ON21203250-166A**
3.375	3.799	0.166	3.376	238	**0401ON21203375-166A**
3.500	3.924	0.166	3.501	239	**0401ON21203500-166A**
3.625	4.049	0.166	3.626	240	**0401ON21203625-166A**
3.750	4.174	0.166	3.751	241	**0401ON21203750-166A**
3.875	4.299	0.166	3.876	242	**0401ON21203875-166A**
+.000/-.004	**+.004/-.000**	**+.005/-.000**	**+.004/-.000**		
4.000	4.616	0.247	4.002	347	**0401ON30804000-247A**
4.125	4.741	0.247	4.127	348	**0401ON30804125-247A**
4.250	4.866	0.247	4.252	349	**0401ON30804250-247A**
4.375	4.991	0.247	4.377	350	**0401ON30804375-247A**
4.500	5.116	0.247	4.502	351	**0401ON30804500-247A**
4.625	5.241	0.247	4.627	352	**0401ON30804625-247A**
4.750	5.366	0.247	4.752	353	**0401ON30804750-247A**
4.875	5.491	0.247	4.877	354	**0401ON30804875-247A**
5.000	5.616	0.247	5.002	355	**0401ON30805000-247A**
5.125	5.741	0.247	5.127	356	**0401ON30805125-247A**
5.250	5.866	0.247	5.252	357	**0401ON30805250-247A**
5.375	5.991	0.247	5.377	358	**0401ON30805375-247A**
5.500	6.116	0.247	5.502	359	**0401ON30805500-247A**
5.625	6.241	0.247	5.627	360	**0401ON30805625-247A**
5.750	6.366	0.247	5.752	361	**0401ON30805750-247A**
5.875	6.491	0.247	5.877	361	**0401ON30805875-247A**

*If used with wear rings, refer to wear ring throat diameter, see Section 9.
For custom groove calculations, see Appendix C.

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Table 5-23. ON Gland Dimensions — Inch (Continued)

A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter*	O-ring Dash Number	Part Number
+.000/-.004	+.004/-.000	+.005/-.000	+.004/-.000		
6.000	6.616	0.247	6.002	362	**0401ON30806000-247A**
6.125	6.741	0.247	6.127	362	**0401ON30806125-247A**
6.250	6.866	0.247	6.252	363	**0401ON30806250-247A**
6.375	6.991	0.247	6.377	363	**0401ON30806375-247A**
6.500	7.116	0.247	6.502	364	**0401ON30806500-247A**
6.750	7.366	0.247	6.752	365	**0401ON30806750-247A**
7.000	7.616	0.247	7.002	366	**0401ON30807000-247A**
7.250	7.866	0.247	7.252	367	**0401ON30807250-247A**
7.500	8.116	0.247	7.502	368	**0401ON30807500-247A**
7.750	8.366	0.247	7.752	369	**0401ON30807750-247A**
+.000/-.005	+.005/-.000	+.005/-.000	+.005/-.000		
8.000	8.830	0.320	8.002	445	**0401ON41508000-320A**
8.250	9.080	0.320	8.252	446	**0401ON41508250-320A**
8.500	9.330	0.320	8.502	446	**0401ON41508500-320A**
9.000	9.830	0.320	9.002	447	**0401ON41509000-320A**
9.500	10.330	0.320	9.502	448	**0401ON41509500-320A**
10.000	10.830	0.320	10.002	449	**0401ON41510000-320A**
10.500	11.330	0.320	10.502	450	**0401ON41510500-320A**
11.000	11.830	0.320	11.002	451	**0401ON41511000-320A**
11.500	12.330	0.320	11.502	452	**0401ON41511500-320A**
12.000	12.830	0.320	12.002	453	**0401ON41512000-320A**
12.500	13.330	0.320	12.502	454	**0401ON41512500-320A**
13.000	13.830	0.320	13.002	455	**0401ON41513000-320A**
13.500	14.330	0.320	13.502	456	**0401ON41513500-320A**
14.000	14.830	0.320	14.002	457	**0401ON41514000-320A**
14.500	15.330	0.320	14.502	458	**0401ON41514500-320A**
15.000	15.830	0.320	15.002	459	**0401ON41515000-320A**
15.500	16.330	0.320	15.502	460	**0401ON41515500-320A**
16.000	16.830	0.320	16.002	461	**0401ON41516000-320A**

*If used with wear rings, refer to wear ring throat diameter, see Section 9.
For custom groove calculations, see Appendix C.

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

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