

Piston Seal

OQ Profile

Catalog EPS 5370/USA



OQ Profile, Rotary PTFE Cap Seal

The Parker OQ profile is a bi-directional piston seal for use in low to medium duty rotary or oscillating applications. The OQ profile is a two piece design comprised of a standard size O-ring energizing a wear resistant PTFE cap. The OQ profile offers long wear and low friction, without stickslip. The PTFE inner diameter is designed with a special interference with the O-ring to eliminate spinning between the O-ring and seal. Special grooves are designed into the PTFE outer diameter to provide lubrication and create a labyrinth effect for reduced leakage. Parker's OQ profile will retrofit non-Parker seals of similar design.

The OQ 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 0205 15% fiberglass-, 5% molybdenum disulfide-filled PTFE	-200°F to 575°F (-129°C to 302°C)	3000 psi (206 bar)	< 3.3 ft/s (1.0 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.

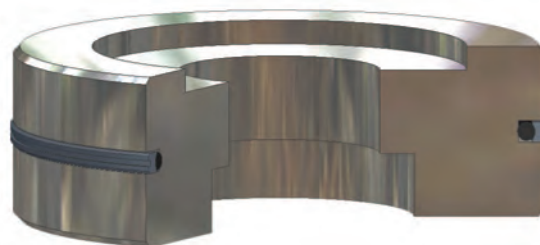
†**Pressure Range** without wear rings (see Table 2-4, page 2-5).

Options

Metric: For metric part numbering and availability, see Tables 7-56 and 7-57 on pages 7-77 through 7-79.



OQ Cross-Section

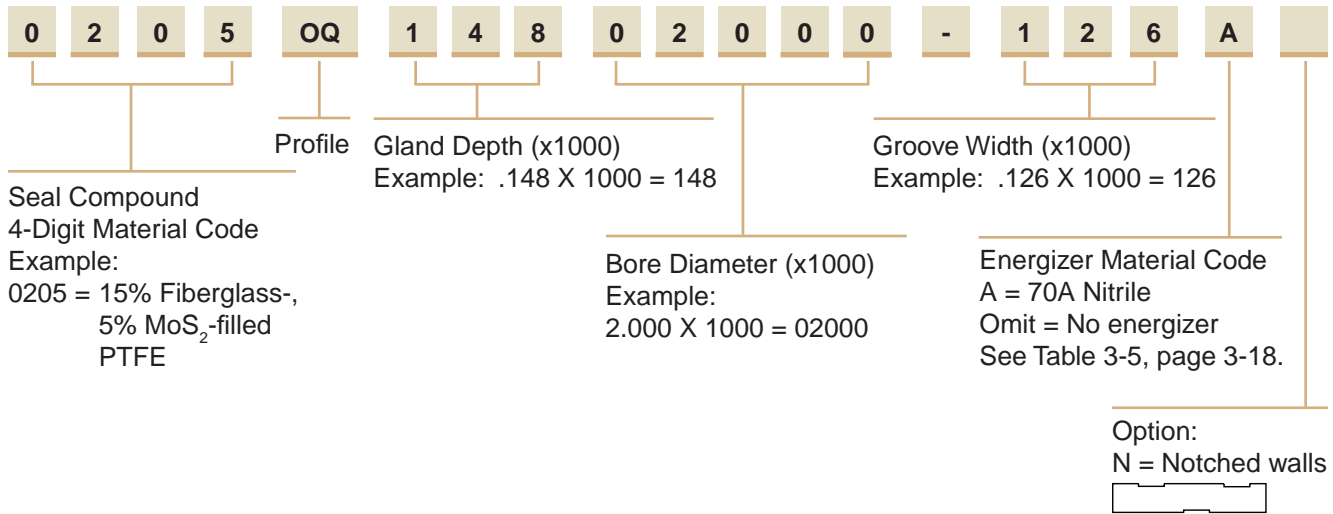


OQ installed in Rotary Gland

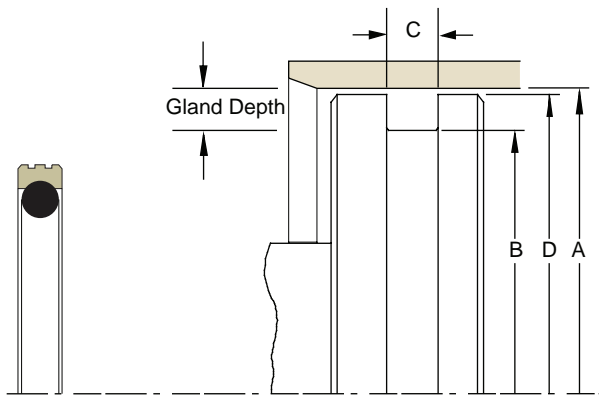
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Part Number Nomenclature — OQ Profile

Table 7-54. OQ Profile — Inch



Gland Dimensions — OQ Profile



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



Table 7-55. OQ Profile — Inch

A Bore Diameter	B Groove Diameter	C Groove Width	D Piston Diameter*	O-ring Dash Number	Part Number
+ .001/- .000	+ .000/- .001	+ .008/- .000	+ .000/- .002		
0.375	0.182	0.087	0.374	008	0205OQ09700375-087A
+ .002/- .000	+ .000/- .002	+ .008/- .000	+ .000/- .002		
0.438	0.245	0.087	0.437	010	0205OQ09700438-087A
0.500	0.307	0.087	0.499	011	0205OQ09700500-087A
0.563	0.370	0.087	0.562	012	0205OQ09700563-087A
0.625	0.432	0.087	0.624	013	0205OQ09700625-087A
0.688	0.495	0.087	0.687	014	0205OQ09700688-087A
0.750	0.557	0.087	0.749	015	0205OQ09700750-087A
0.813	0.620	0.087	0.812	016	0205OQ09700813-087A
0.875	0.682	0.087	0.874	017	0205OQ09700875-087A
0.938	0.745	0.087	0.937	018	0205OQ09700938-087A
1.000	0.807	0.087	0.999	019	0205OQ09701000-087A
1.125	0.932	0.087	1.124	021	0205OQ09701125-087A
1.250	1.057	0.087	1.249	023	0205OQ09701250-087A
1.375	1.182	0.087	1.374	025	0205OQ09701375-087A

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

Table 7-55. OQ Gland Dimensions — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Groove Width	D Piston Diameter*	O-ring Dash Number	Part Number
+ .002/- .000	+ .000/- .002	+ .008/- .000	+ .000/- .002		
1.500	1.205	0.126	1.499	123	0205OQ14801500-126A
1.625	1.330	0.126	1.624	125	0205OQ14801625-126A
1.750	1.455	0.126	1.749	127	0205OQ14801750-126A
1.875	1.580	0.126	1.874	129	0205OQ14801875-126A
+ .003/- .000	+ .000/- .003	+ .008/- .000	+ .000/- .002		
2.000	1.705	0.126	1.999	131	0205OQ14802000-126A
2.125	1.830	0.126	2.124	133	0205OQ14802125-126A
2.250	1.955	0.126	2.249	135	0205OQ14802250-126A
2.375	2.080	0.126	2.374	137	0205OQ14802375-126A
2.500	2.205	0.126	2.499	139	0205OQ14802500-126A
2.625	2.330	0.126	2.624	141	0205OQ14802625-126A
2.750	2.455	0.126	2.749	143	0205OQ14802750-126A
2.875	2.580	0.126	2.874	145	0205OQ14802875-126A
+ .003/- .000	+ .000/- .003	+ .008/- .000	+ .000/- .003		
3.000	2.567	0.165	2.999	230	0205OQ21703000-165A
3.125	2.692	0.165	3.124	231	0205OQ21703125-165A
3.250	2.817	0.165	3.249	232	0205OQ21703250-165A
3.375	2.942	0.165	3.374	233	0205OQ21703375-165A
3.500	3.067	0.165	3.499	234	0205OQ21703500-165A
3.625	3.192	0.165	3.624	235	0205OQ21703625-165A
3.750	3.317	0.165	3.749	236	0205OQ21703750-165A
3.875	3.442	0.165	3.874	237	0205OQ21703875-165A
4.000	3.567	0.165	3.999	238	0205OQ21704000-165A
4.125	3.692	0.165	4.124	239	0205OQ21704125-165A
4.250	3.817	0.165	4.249	240	0205OQ21704250-165A
4.375	3.942	0.165	4.374	241	0205OQ21704375-165A
4.500	4.067	0.165	4.499	242	0205OQ21704500-165A
4.625	4.192	0.165	4.624	243	0205OQ21704625-165A
+ .004/- .000	+ .000/- .004	+ .008/- .000	+ .000/- .003		
4.750	4.317	0.165	4.749	244	0205OQ21704750-165A
4.875	4.442	0.165	4.874	245	0205OQ21704875-165A
5.000	4.567	0.165	4.999	246	0205OQ21705000-165A
5.125	4.692	0.165	5.124	247	0205OQ21705125-165A
5.250	4.817	0.165	5.249	248	0205OQ21705250-165A
5.375	4.942	0.165	5.374	249	0205OQ21705375-165A
5.500	5.067	0.165	5.499	250	0205OQ21705500-165A
5.625	5.192	0.165	5.624	251	0205OQ21705625-165A
5.750	5.317	0.165	5.749	252	0205OQ21705750-165A
5.875	5.442	0.165	5.874	253	0205OQ21705875-165A
+ .004/- .000	+ .000/- .004	+ .008/- .000	+ .000/- .004		
6.000	5.390	0.248	5.999	355	0205OQ30506000-248A
6.250	5.640	0.248	6.249	357	0205OQ30506250-248A
6.500	5.890	0.248	6.499	359	0205OQ30506500-248A
6.750	6.140	0.248	6.749	361	0205OQ30506750-248A
7.000	6.390	0.248	6.999	362	0205OQ30507000-248A
+ .005/- .000	+ .000/- .005	+ .008/- .000	+ .000/- .004		
7.250	6.640	0.248	7.248	363	0205OQ30507250-248A
7.500	6.890	0.248	7.498	364	0205OQ30507500-248A
7.750	7.140	0.248	7.748	365	0205OQ30507750-248A

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

Table 7-55. OQ Gland Dimensions — Inch (Continued)

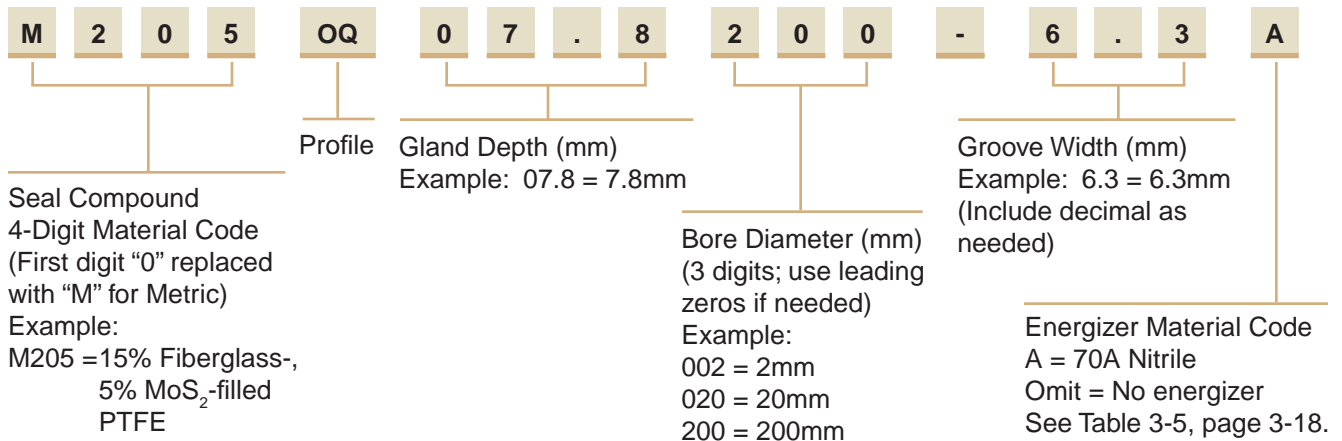
A Bore Diameter	B Groove Diameter	C Groove Width	D Piston Diameter*	O-ring Dash Number	Part Number
+ .005/- .000	+ .000/- .005	+ .008/- .000	+ .000/- .004		
8.000	7.390	0.248	7.998	366	0205OQ30508000-248A
8.250	7.640	0.248	8.248	367	0205OQ30508250-248A
8.500	7.890	0.248	8.498	368	0205OQ30508500-248A
8.750	8.140	0.248	8.748	369	0205OQ30508750-248A
9.000	8.390	0.248	8.998	370	0205OQ30509000-248A
9.250	8.640	0.248	9.248	371	0205OQ30509250-248A
9.500	8.890	0.248	9.498	372	0205OQ30509500-248A
9.750	9.140	0.248	9.748	373	0205OQ30509750-248A
10.000	9.390	0.248	9.998	374	0205OQ30510000-248A
10.500	9.890	0.248	10.498	376	0205OQ30510500-248A
11.000	10.390	0.248	10.998	377	0205OQ30511000-248A
11.500	10.890	0.248	11.498	378	0205OQ30511500-248A
+ .006/- .000	+ .000/- .006	+ .008/- .000	+ .000/- .005		
12.000	11.173	0.319	11.998	451	0205OQ41412000-319A
12.500	11.673	0.319	12.498	452	0205OQ41412500-319A
13.000	12.173	0.319	12.998	453	0205OQ41413000-319A
13.500	12.673	0.319	13.498	454	0205OQ41413500-319A
14.000	13.173	0.319	13.998	455	0205OQ41414000-319A
14.500	13.673	0.319	14.498	456	0205OQ41414500-319A
15.000	14.173	0.319	14.998	457	0205OQ41415000-319A
15.500	14.673	0.319	15.498	458	0205OQ41415500-319A
16.000	15.173	0.319	15.998	459	0205OQ41416000-319A
16.500	15.673	0.319	16.498	460	0205OQ41416500-319A
17.000	16.173	0.319	16.998	461	0205OQ41417000-319A
17.500	16.673	0.319	17.498	462	0205OQ41417500-319A
18.000	17.173	0.319	17.998	463	0205OQ41418000-319A
18.500	17.673	0.319	18.498	464	0205OQ41418500-319A
19.000	18.173	0.319	18.998	465	0205OQ41419000-319A
19.500	18.673	0.319	19.498	466	0205OQ41419500-319A
+ .007/- .000	+ .000/- .007	+ .008/- .000	+ .000/- .005		
20.000	19.173	0.319	19.998	467	0205OQ41420000-319A

*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 —OQ Profile

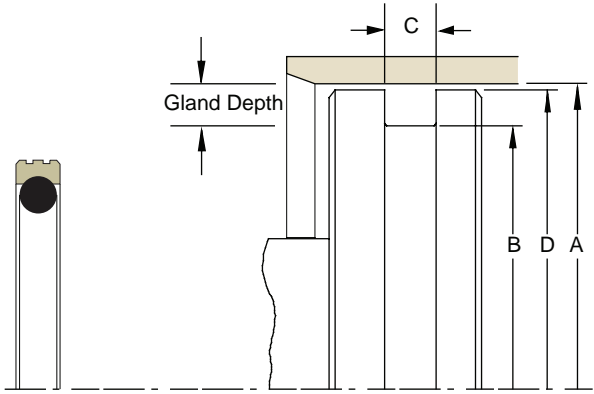
Table 7-56. OQ Profile — Metric



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Gland Dimensions — OQ Profile



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

Table 7-57. OQ Profile — Metric

A Bore Diameter	B Groove Diameter	C Groove Width	D Piston Diameter*	O-ring Dash Number	Part Number
H9	h9	+0.20/-0.00	h8		
8.00	3.10	2.20	7.97	006	M205OQ02.5008-2.2A
10.00	5.10	2.20	9.97	008	M205OQ02.5010-2.2A
12.00	7.10	2.20	11.97	010	M205OQ02.5012-2.2A
16.00	11.10	2.20	15.97	016	M205OQ02.5016-2.2A
20.00	15.10	2.20	19.97	015	M205OQ02.5020-2.2A
22.00	17.10	2.20	21.97	016	M205OQ02.5022-2.2A
25.00	20.10	2.20	24.97	018	M205OQ02.5025-2.2A
30.00	25.10	2.20	29.97	021	M205OQ02.5030-2.2A
32.00	27.10	2.20	31.97	023	M205OQ02.5032-2.2A
40.00	32.50	3.20	39.94	124	M205OQ03.8040-3.2A
45.00	37.50	3.20	44.94	127	M205OQ03.8045-3.2A
50.00	42.50	3.20	49.94	130	M205OQ03.8050-3.2A
55.00	47.50	3.20	54.94	133	M205OQ03.8055-3.2A
63.00	55.50	3.20	62.94	138	M205OQ03.8063-3.2A
70.00	62.50	3.20	69.94	143	M205OQ03.8070-3.2A
80.00	69.00	4.20	79.90	231	M205OQ05.5080-4.2A
90.00	79.00	4.20	89.90	234	M205OQ05.5090-4.2A
100.00	89.00	4.20	99.90	237	M205OQ05.5100-4.2A
110.00	99.00	4.20	109.90	241	M205OQ05.5110-4.2A
120.00	109.00	4.20	119.90	244	M205OQ05.5120-4.2A
125.00	114.00	4.20	124.90	245	M205OQ05.5125-4.2A
130.00	119.00	4.20	129.90	247	M205OQ05.5130-4.2A
140.00	124.50	6.30	139.90	352	M205OQ07.8140-6.3A
150.00	134.50	6.30	149.90	355	M205OQ07.8150-6.3A
160.00	144.50	6.30	159.90	358	M205OQ07.8160-6.3A
200.00	184.50	6.30	199.90	366	M205OQ07.8200-6.3A
220.00	204.50	6.30	219.90	369	M205OQ07.8220-6.3A
230.00	214.50	6.30	229.90	370	M205OQ07.8230-6.3A
240.00	224.50	6.30	239.90	372	M205OQ07.8240-6.3A
250.00	234.50	6.30	249.90	374	M205OQ07.8250-6.3A
300.00	284.50	6.30	299.90	379	M205OQ07.8300-6.3A
320.00	304.50	6.30	319.90	381	M205OQ07.8320-6.3A
400.00	379.00	8.10	399.90	458	M205OQ10.5400-8.1A
500.00	479.00	8.10	499.90	467	M205OQ10.5500-8.1A
600.00	579.00	8.10	599.90	472	M205OQ10.5600-8.1A

*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.