

# P4300 Hi-Performance O-Rings

NO. 5204B1-USA

## Parker's state-of-the-art P4300 high-performance polyurethane is now available in an O-ring profile

### Dynamic Applications

In any dynamic seal application where pressure and seal life are important factors, P4300 O-rings are recommended. P4300 is specially suitable for use in heavy-duty hydraulic and pneumatic cylinders or where elevated service temperature capability, superior resistance to extrusion under high pressure, wear and abrasion resistance, low compression set and extend seal life are required.

### Static Applications

P4300 O-rings are recommended for use in any environment where the need for a high-temperature, extrusion and wear-resistant, low compression set static seal is required and where polyurethane is compatible with the sealed media and service environment.

### Features

- Service temperature of -65° F to 275° F
- 8000 psi tensile strength
- Abrasion resistant
- Bayshore resilience of 60%
- Low compression set

### Reduced Compression Set Benefits of P4300

Not only does P4300 have the strength and abrasion resistance typical of all polyurethane elastomers, it also has the high resilience and low compression set characteristics of a nitrile polymer (See table). In certain situations, the presence of high pressure on an elastomer O-ring can jeopardize its ability to seal. Low pressure can be a problem as well. If the system pressure is below 100 psi, it is classified as low pressure. If system pressure is not great enough to "activate" the seal, the design must rely solely on the resilience of the elastomer to allow it to attempt to return to its original (pre-compressed) state while under compression. Over time however, the elastomer will be less able to resist compression forces and take a compression "set", resulting in a reduced ability to return to its original pre-compressed condition, thereby creating a condition of possible seal failure.



### Temperature Considerations

When choosing a seal material it is important to consider both system temperature and the temperature range in the immediate O-ring environment (seal interface). You must also consider the duration of exposure to any high temperature, whether it involves short bursts or long, sustained exposure. In this area P4300 performs exceptionally well. With a temperature range of -65° F to 275° F, P4300 is a suitable solution for some of the most demanding O-ring applications.

### Chemical Compatibility

A major factor in O-Ring material selection is the material's ability to resist degradation when exposed to certain chemicals. Therefore, an important step in material selection is to match your application's anticipated media with the material that provides the greatest resistance. Compound P4300 is compatible with most petroleum base fluids, acetic and alkaline solutions under 10% concentration, salts, aliphatic alcohol, hydrocarbons and mixtures containing less than 80% aromatics, oxygen, and ozone.

#### Original Physical Properties

Specific Gravity	1.20
Hardness	93
Bayshore Resilience	62%
Ultimate Tensile Strength	8000 psi
100% Modulus (psi)	1800
300% Modulus (psi)	2700
Elongation @ Break	600%
Compression set	
70 hrs @158° F	18%
70 hrs @ 212° F	32%
Operating Temp. Range	-65° F to 275° F

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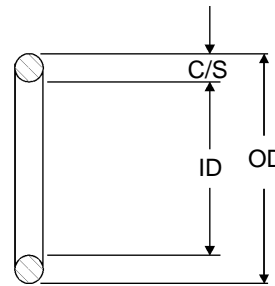
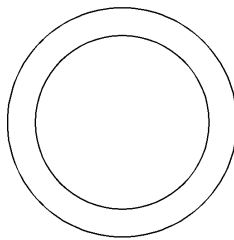
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## Available Sizes\*

\*Other sizes may be available.  
Please contact the division for  
the most recent availability list.



Part Number	ID	OD	C/S	Part Number	ID	OD	C/S
43005682-006	1/8	1/4	1/16	43005682-124	1 1/4	1 7/16	3/32
43005682-007	5/32	9/32	1/16	43005682-125	1 5/16	1 1/2	3/32
43005682-008	3/16	5/16	1/16	43005682-126	1 3/8	1 9/16	3/32
43005682-009	7/32	11/32	1/16	43005682-127	1 7/16	1 5/8	3/32
43005682-010	1/4	3/8	1/16	43005682-128	1 1/2	1 11/16	3/32
43005682-011	5/16	7/16	1/16	43005682-129	1 9/16	1 3/4	3/32
43005682-012	3/8	1/2	1/16	43005682-130	1 5/8	1 13/16	3/32
43005682-013	7/16	9/16	1/16	43005682-131	1 11/16	1 7/8	3/32
43005682-014	1/2	5/8	1/16	43005682-132	1 3/4	1 15/16	3/32
43005682-015	9/16	11/16	1/16	43005682-133	1 13/16	2	3/32
43005682-016	5/8	3/4	1/16	43005682-134	1 7/8	2 1/16	3/32
43005682-017	11/16	13/16	1/16	43005682-135	1 15/16	2 1/8	3/32
43005682-018	3/4	7/8	1/16	43005682-136	2	2 3/16	3/32
43005682-019	13/16	15/16	1/16	43005682-210	3/4	1	1/8
43005682-020	7/8	1	1/16	43005682-211	13/16	1 1/16	1/8
43005682-021	15/16	1 1/16	1/16	43005682-212	7/8	1 1/8	1/8
43005682-022	1	1/8	1/16	43005682-213	15/16	1 3/16	1/8
43005682-023	1 1/16	1 3/16	1/16	43005682-214	1	1 1/4	1/8
43005682-024	1 1/8	1 1/4	1/16	43005682-215	1 1/16	1 5/16	1/8
43005682-025	1 3/16	1 5/16	1/16	43005682-216	1 1/8	1 3/8	1/8
43005682-026	1 1/4	1 3/8	1/16	43005682-217	1 3/16	1 7/16	1/8
43005682-027	1 5/16	1 7/16	1/16	43005682-218	1 1/4	1 1/2	1/8
43005682-028	1 3/8	1 1/2	1/16	43005682-219	1 5/16	1 9/16	1/8
43005682-029	1 1/2	1 5/8	1/16	43005682-220	1 3/8	1 5/8	1/8
43005682-030	1 5/8	1 3/4	1/16	43005682-221	1 7/16	1 11/16	1/8
43005682-109	5/16	1/2	3/32	43005682-222	1 1/2	1 3/4	1/8
43005682-110	3/8	9/16	3/32	43005682-223	1 5/8	1 7/8	1/8
43005682-111	7/16	5/8	3/32	43005682-224	1 3/4	2	1/8
43005682-112	1/2	11/16	3/32	43005682-225	1 7/8	2 1/8	1/8
43005682-113	9/16	3/4	3/32	43005682-226	2	2 1/4	1/8
43005682-114	5/8	13/16	3/32	43005682-227	2 1/16	2 3/8	1/8
43005682-115	11/16	7/8	3/32	43005682-228	2 1/4	2 1/2	1/8
43005682-116	3/4	15/16	3/32	43005682-229	2 3/8	2 5/8	1/8
43005682-117	13/16	1	3/32	43005682-230	2 1/2	2 3/4	1/8
43005682-118	7/8	1 1/16	3/32	43005682-231	2 5/8	2 7/8	1/8
43005682-119	15/16	1 1/8	3/32	43005682-232	2 3/4	3	1/8
43005682-120	1	1 3/16	3/32	43005682-233	2 7/8	3 1/8	1/8
43005682-121	1 1/16	1 1/4	3/32	43005682-234	3	3 1/4	1/8
43005682-122	1 1/8	1 5/16	3/32	43005682-235	3 1/8	3 3/8	1/8
43005682-123	1 3/16	1 3/8	3/32	43005682-236	3 1/4	3 1/2	1/8

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