



Micro-Miniature and Close Tolerance O-Rings and Seals

Precision Associates is the source for Micro-Miniature and Close Tolerance O-Rings and seals.

Micro-Miniature

The drive for smaller and lighter equipment has compelled the need for smaller, more precise rubber seals.

Precision Associates' proprietary molding process, state of the art deflashing equipment and in-house tooling facility allow us to accurately produce quality molded O-Rings and seals smaller than .1" (2.5 mm). At present our smallest O-Ring has a major diameter of .012", with a cross section and ID of .004" each. (an .030" diameter O-Ring is pictured below just to the left and slightly below the head of the pin).



Micro-Miniature Seals

Head of pin is .072" diameter

Our Micro-Miniature seals are inspected under magnification and like all PAI seals - 100% are visually inspected for flash and flaws.

Close Tolerance Seals

Lean manufacturing, defect reduction and other quality practices may require rubber parts held to tolerances tighter than the AS-568 standard.

The same equipment and processes that are used to produce minute seals enable us to manufacture O-Rings and seals held to close tolerances. Tolerances better than AS-568 can be held to specified dimensions. Specific rubber properties may also be designated for control.

Close tolerance seals start with a precise tool and intimate knowledge of our compounds and production processes. Precision Associates' in-house tool shop will produce a mold to precisely match the shrink characteristics of the desired rubber material. Production parameters are tightly controlled to minimize variation.

In addition to our standard 100% visual inspection - when the size and configuration of the seal permit - PAI uses automated measuring equipment to ensure compliance with your specification. When necessary, gauging may be performed to verify dimensional integrity.

Close Tolerance and Micro-Miniature O-Rings and Seals are available in the following Polymers

- | | | |
|---------------------------------|-------------------------------|---------------------------|
| • Nitrile (Buna N, NBR) | • Fluoroelastomer (Viton®) | • Chloroprene (Neoprene®) |
| • Carboxylated Nitrile (XNBR) | • Fluorosilicone | • EPDM |
| • Hydrogenated Nitrile (HNBR) | • Silicone | • Millable Gum Urethane |
| • Styrene Butadiene | • Perfluoroelastomer (P-REX™) | • Polyacrylate |
| • Butyl | • Aflas® | • Hydrin |
| • Chlorosulfonated Polyethylene | • Vamac® | • Natural Rubber |



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Ask us about our complete line of product literature:

- ***Standard O-Rings***
- ***Special Size O-Rings***
- ***U-Cups***
- ***V-Rings***
- ***Rod Wipers***
- ***X-Rings***
- ***8-Rings™***
- ***Multiseal® Low Friction Seals***
- ***Kurv-Bak™ Hard Rubber Backup Rings***
- ***Rubber Balls***
- ***Custom Moldings***
- ***Machined Plastics***

After 58 years in the rubber business, we've learned to be flexible. We'll bend over backwards to design custom solutions that meet your needs *precisely*. PAI is the company you can trust for rubber seal solutions YOUR WAY!

- Over 1,000 different compounds
- Custom Molding
- More than 2,500 O-Ring Sizes
- 99% on-time delivery
- On-Site Mold Shop
- ISO 14644-1 Class 7 Clean Room