Rubber Balls
Precision Ground Balls
Our Rubber Balls are precision ground to remove parting lines for a superior sealing surface. Ground balls are available in a variety of Polymers in durometers from 70 to 90. Our standard materials are listed below. Compound 5716 is usually available “off the shelf”.

<table>
<thead>
<tr>
<th>ASTM Designation</th>
<th>Common Polymer Name</th>
<th>Standard Compound</th>
<th>Durometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBR</td>
<td>Nitrile, Buna N</td>
<td>5716</td>
<td>70</td>
</tr>
<tr>
<td>FKM</td>
<td>Fluoroelastomer, Viton®</td>
<td>8746</td>
<td>75</td>
</tr>
<tr>
<td>CR</td>
<td>Neoprene</td>
<td>4753</td>
<td>70</td>
</tr>
<tr>
<td>EPDM</td>
<td>EPDM</td>
<td>23701</td>
<td>70</td>
</tr>
<tr>
<td>HNBR</td>
<td>Hydrogenated Nitrile</td>
<td>55801</td>
<td>75</td>
</tr>
</tbody>
</table>

Most compounds that are 70 Durometer and higher in these five polymers can be used to make ground balls. Sometimes we are able to grind balls in compounds or polymers that are not normally ground. Contact us to find out if we can produce your special requirement. Ground balls are available in the sizes and tolerances listed below. Because our balls are ground after molding, you do not need to consider compound shrinkage.

<table>
<thead>
<tr>
<th>PAI Size</th>
<th>Fractional Diameter</th>
<th>Decimal Diameter</th>
<th>Diometric Tolerance +/-</th>
<th>Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901-188</td>
<td>3/16</td>
<td>.187</td>
<td>.003</td>
<td>.003</td>
</tr>
<tr>
<td>1901-250</td>
<td>1/4</td>
<td>.250</td>
<td>.003</td>
<td>.003</td>
</tr>
<tr>
<td>1901-312</td>
<td>5/16</td>
<td>.312</td>
<td>.003</td>
<td>.003</td>
</tr>
<tr>
<td>1901-375</td>
<td>3/8</td>
<td>.375</td>
<td>.003</td>
<td>.003</td>
</tr>
<tr>
<td>1901-437</td>
<td>7/16</td>
<td>.437</td>
<td>.004</td>
<td>.004</td>
</tr>
<tr>
<td>1901-500</td>
<td>1/2</td>
<td>.500</td>
<td>.004</td>
<td>.005</td>
</tr>
<tr>
<td>1901-625</td>
<td>5/8</td>
<td>.625</td>
<td>.004</td>
<td>.005</td>
</tr>
<tr>
<td>1901-750</td>
<td>3/4</td>
<td>.750</td>
<td>.004</td>
<td>.005</td>
</tr>
</tbody>
</table>

Please contact Precision Associates for sizes not listed.
Molded Balls
Molded Rubber Balls can be made in almost every one of our 1,000+ compounds. Current tooling is listed below.

<table>
<thead>
<tr>
<th>Mold ID</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>901-044</td>
<td>.044</td>
</tr>
<tr>
<td>901-060</td>
<td>.060</td>
</tr>
<tr>
<td>901-127</td>
<td>1/8 in.</td>
</tr>
<tr>
<td>901-134</td>
<td>.134</td>
</tr>
<tr>
<td>901-139</td>
<td>.139</td>
</tr>
<tr>
<td>901-156</td>
<td>.156</td>
</tr>
<tr>
<td>901-188</td>
<td>.188</td>
</tr>
<tr>
<td>901-200</td>
<td>.200</td>
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<tr>
<td>901-218</td>
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<td>901-250</td>
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<td>901-259</td>
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<td>901-264</td>
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<td>901-281</td>
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<td>901-312</td>
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<tr>
<td>901-320</td>
<td>.320</td>
</tr>
<tr>
<td>901-325</td>
<td>.325</td>
</tr>
<tr>
<td>901-375</td>
<td>.375</td>
</tr>
<tr>
<td>901-390</td>
<td>.390</td>
</tr>
<tr>
<td>901-402</td>
<td>.402</td>
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<tr>
<td>901-446</td>
<td>.446</td>
</tr>
<tr>
<td>901-450</td>
<td>.450</td>
</tr>
<tr>
<td>901-500</td>
<td>1/2 in.</td>
</tr>
<tr>
<td>901-528</td>
<td>.528</td>
</tr>
<tr>
<td>901-645</td>
<td>.645</td>
</tr>
<tr>
<td>901-760</td>
<td>.760</td>
</tr>
<tr>
<td>901-768</td>
<td>.768</td>
</tr>
<tr>
<td>901-775</td>
<td>.775</td>
</tr>
<tr>
<td>901-866</td>
<td>22 mm</td>
</tr>
<tr>
<td>901-896</td>
<td>.896</td>
</tr>
<tr>
<td>901-937</td>
<td>15/16 in.</td>
</tr>
<tr>
<td>901-1.000</td>
<td>1 in.</td>
</tr>
<tr>
<td>901-1.125</td>
<td>1 1/8 in.</td>
</tr>
<tr>
<td>901-1.375</td>
<td>1 3/8 in.</td>
</tr>
<tr>
<td>901-1.500</td>
<td>1 1/2 in.</td>
</tr>
<tr>
<td>901-1.625</td>
<td>1 5/8 in.</td>
</tr>
<tr>
<td>901-2.039</td>
<td>2 1/4 in.</td>
</tr>
<tr>
<td>901-2.750</td>
<td>2 3/4 in.</td>
</tr>
<tr>
<td>901-5.000</td>
<td>5 in.</td>
</tr>
<tr>
<td>901-6.500</td>
<td>6 1/2 in.</td>
</tr>
</tbody>
</table>

Please contact Precision Associates for sizes not listed.

Polished Balls
Because of properties inherent in some rubber materials, they cannot be successfully ground. As an alternative, PAI uses a method we call “Polishing” to provide a surface finish that is an improvement over standard molded balls. In many cases the parting line can be reduced significantly using this process. All of our balls under 1/2” can be polished successfully. Larger balls can also be improved by polishing. This polishing process is also an option to avoid expensive grinding fixtures for your custom size requirements. The finish of ground balls can also be improved by polishing them to a shiny finish.
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**
- **Medical Seals**
- **Custom Moldings**

After 56 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 2,300 O-Ring Sizes
- 99% on-time delivery
- On-Site Mold Shop
- ISO 14644-1 Class 7 Clean Room