Press-in-Place Seals

Extruded and Precision Cut Products



High Seal Retention with Low Tooling Cost:

Parker TechSeal Division's precision cut press-in-place (PiP) seal technology offers improved seal retention and installation efficiency when compared to standard static face seal products.

The precision cut PiP seal has nibs which are designed into the I.D. and / or the O.D. of the seal, creating an interference between the groove wall and the seal. The interference created by the nibs ensures maximum seal retention. This retention eliminates the need for adhesives, improving installation efficiency as well as serviceability.

TechSeal's manufacturing process does not require molds, thus minimizing upfront tooling costs and eliminating problems caused by flash and parting lines.

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Product Features:

- No flash, voids, or parting lines
- Minimal tooling cost
- Maximum seal retention
- Large contact surface area
- Ease of installation

- Custom designs from 0.050" to 15" in diameter
- Available in a wide selection of sealing grade materials



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FEA of a Press-in-Place Seal

Below is the Finite Element Analysis (FEA) simmulation, showing how TechSeal's precision cut press-inplace (PiP) seal with nibs on the seal O.D. would perform when being pressed into a groove.



As a precision cut seal, the PiP seal still maintains its rectangular cross section, providing a maximum sealing surface. A wider contact surface can compensate for more imperfections in stamped or cast mating components. The two FEA simulations below demonstrate the wider contact area of a precision cut PiP than that of an O-ring.



Taking into consideration materials used as well as the geometries of the mating surfaces, TechSeal's team of Application Engineers can perform an FEA simmulation to test the PiP seal's behavior under various conditions, ensuring a good fit across all tolerance ranges. For more information please contact TechSeal's Application Engineering team.

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