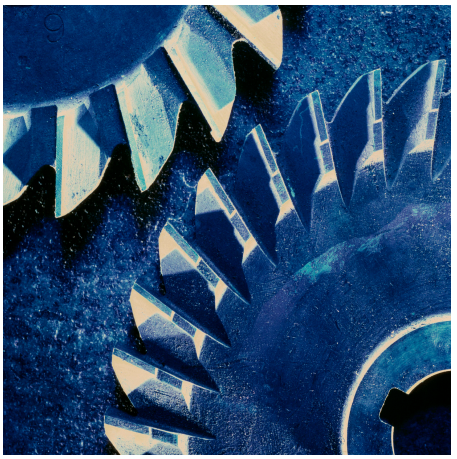
Self-Retaining Seals

Friction-Fit and Press-in-Place Series



Retention without adhesive or fasteners:

Parker designs and manufactures a line of self-retaining seals that can maintain proper sealing position in the groove by friction. Parker's self-retaining seals are available in friction-fit hollow profiles, press-in-place solid profiles and hybrid configurations of the two.

The friction-fit hollow profiles achieve self-retention by having the seal width slightly oversized from the groove width, while the press-in-place solid profiles achieve self-retention by having retaining features such as ribs or nibs to create an interference between the seal and the groove wall.

Both the friction-fit and press-in-place series can be customized to accommodate many groove types and to provide similar benefits of enhanced retention and easy installation.

Contact Information:

Parker Hannifin Corporation
O-Ring & Engineered Seals Division
2360 Palumbo Drive
Lexington, KY 40509

phone 859 269 2351

www.parker.com/oes

Product Features:

- High seal retention without the need for adhesive, mechanical fasteners or expensive groove machining
- Friction-fit hollow profiles
- Press-in-place solid profiles
- Ideal for wandering groove applications
- Standard and custom profiles that can fit many groove designs
- Easy installation and servicing
- Available in a broad selection of materials
- Design assistance from Application Engineers

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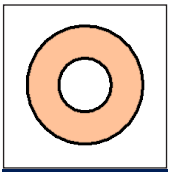
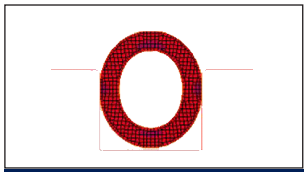
Self-Retaining Sealing Mechanisms

Friction-Fit Hollow Profiles

For the friction-fit hollow profile, the seal cross section is designed to be oversized from the groove width, creating a frictional inteference between the seal and the groove, resulting in the self-retaining capability of the seal.



Hollow O

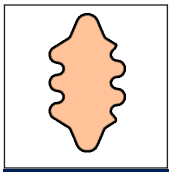


FEA of Interference Model

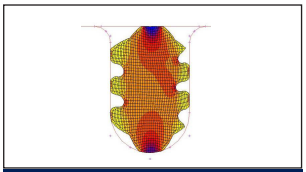
FEA: Finite Element Analysis

Press-in-Place Solid Profiles

For the press-in-place solid profile, the retaining features are integrated directly onto the seal outside and/or inside diameter. Those features create an inteference between the seal and the groove wall, resulting in the self-retaining capability for the seal.



Christmas Tree



FEA of Interference Model

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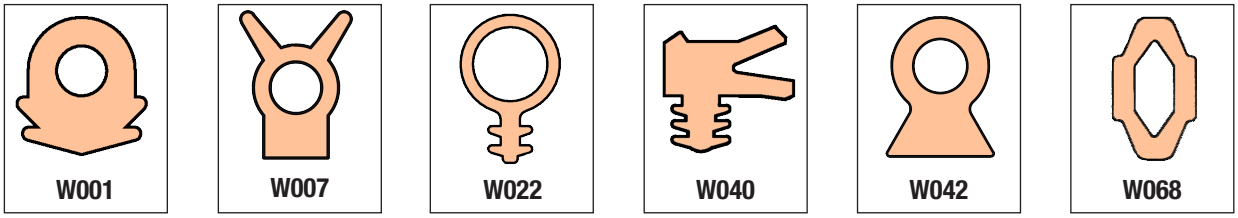


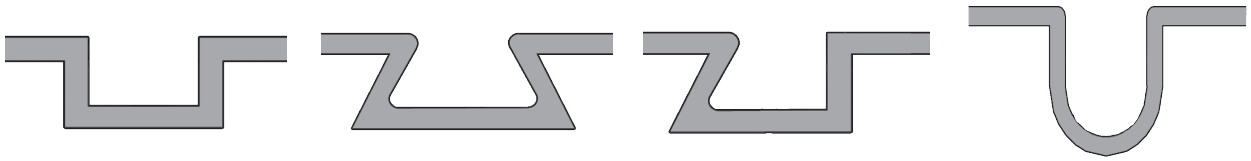
Examples of Custom Friction-Fit and Press-in-Place Profiles

**Note: All W0XX profiles above are ParFab™ profiles and can be found in the ParFab Design Guide (TSD 5420).*

Typical Groove Configurations

Self-retaining seals are commonly used for applications that have the following types of groove configurations. Please consult with our Application Engineers for further assistance on groove information.

****Note: Parker's self-retaining seals are not recommended for grooves with large draft angles.*



Square O-ring Groove **Dovetail Groove** **Half Dovetail Groove** **Deep Groove**

and more.

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