Rectangular Cross Sections

Extruded and Precision Cut Seals
for Static Applications

Design Flexibility and Wide Sealing Surface:

The Parker TechSeal Division designs and manufactures seals with rectangular cross sections for static applications in many industries.

The profile's rectangular geometry enables customers to easily customize the seal dimensions to fit their application's specific grooves. TechSeal's manufacturing capability allows us to create this rectangular profile with unlimited cross-sectional dimensions, adding to the seal's design flexibility.

In addition, the wide rectangular surface contact area can compensate for imperfections in the cast or machined mating components.

TechSeal's team of Application Engineers are available to assist our customers with seal design and material selection.

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Product Features:

- Maximum sealing surface contact area with minimum compression
- Improved ID or OD retention
- Rectangular geometry and manufacturing process allow for greater design flexibility
- No flash, voids, non-fills, or parting lines
- Wide selection of sealing grade materials available
- Custom cross section dimensions from 0.030" to 18" in ID
- No molds required

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Design Advantages

Rectangular profiles provide design engineers with greater flexibility, especially for applications with non-square grooves. The profile dimensions can be designed independently from each other; therefore, engineers can vary the thickness to better fit the groove.

Figure 1 shows two examples of rectangular grooves where a rectangular profile is an ideal sealing solution.

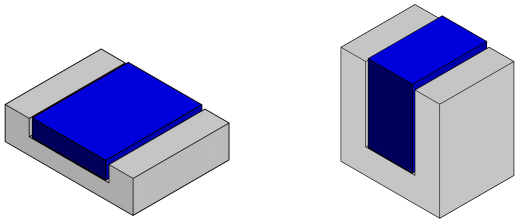

Figure 1

Figure 2 represents the Finite Element Analysis (FEA) simulations showing how a rectangular cross section typically performs when compressed in groove.

- Uniform squeeze
- Maximum contact
- Minimal stress

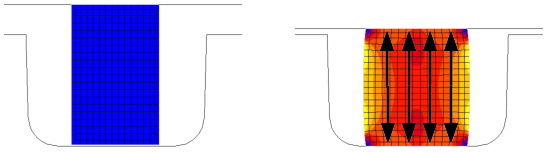

Figure 2

Design Guide

These percentages are typical recommendations based on a standard groove. Please consult our Application Engineers for design assistance specific to each application.

Recommended Cross Section Desgin

Design Categories	Percentage
% Squeeze	10% - 30%
% Gland Fill	95% max
% Installed Stretch	5% max

Sealing Grade Materials Selection

Rectangular cross section seals are available in most standard and specialty polymer families including:

- Silicone (VMQ), fluorosilicone (FVMQ)
- Nitrile (NBR), hydrogenated nitrile (HNBR)
- Fluorocarbon (FKM)
- Ethylene propylene (EPDM)
- Neoprene (CR)
- Styrene butadiene (SBR)
- Thermoplastic elastomer (TPR)

TechSeal's materials meet many specifications such as UL 94, FDA, USP Class VI, NSF, AMS standards, Mil specs and more. To ensure the optimal seal performance for any specific application, please contact the TechSeal Division for compound selection.

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