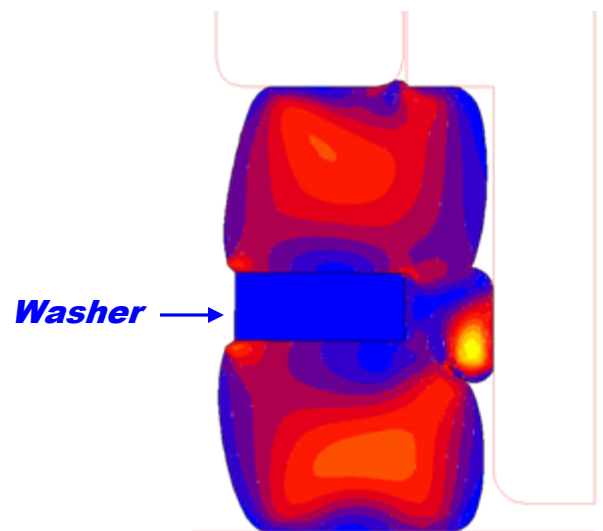
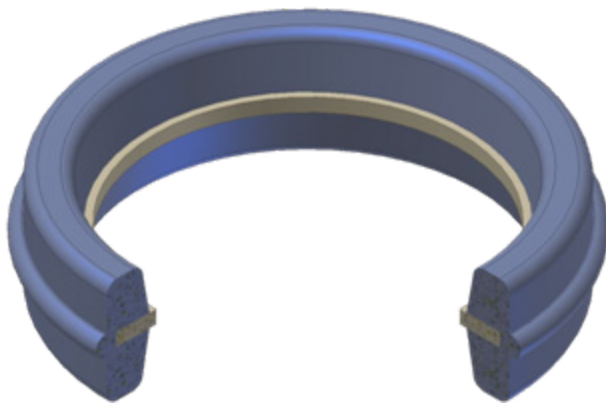


Application:

Shower head internal seal

Problem:

An axial seal was required to seal water between three concentric components in a newly developed shower head. Packaging constraints dictated a very narrow sealing area with no support on the inside face of the seal. Traditional seal designs would extrude out of the seal gap into the water stream and fail.



Solution:

A small stainless steel washer is overmolded in the seal, reinforcing the inside diameter to prevent extrusion even under vacuum. The outer surface of the seal is shaped to allow easy assembly while affording adequate retention for subsequent assembly operations. A symmetric design eliminates the need to orient the seal for installation, yet still balances the need to seal against all three mating components.

To further add value to the design solution, the recommended seal compound is a new EPDM recently formulated by Parker ESD for outstanding chloramine resistance. Chloramines are being phased in across the United States to replace chlorine as a water purifier, but standard EPDM rubber degrades in this new chemical environment.

The Engineered Seal Division's engineering expertise and program management provided the customer with a successful, leak-free joint with delivery of the very first prototype seals.

Similar Applications:

Any axial sealing application where an inner support wall is not feasible.