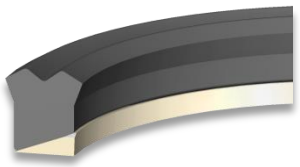
HZΔ™ HZ Seal with Delta Backup

The HZ Seal with Delta Backup is a single directional squeeze type seal for both low and high pressure. Utilizing a low compression set rubber, it provides its own compressive seal force under low pressure conditions. As pressure increases, hydrostatic pressure mechanically transmits through the elastomer seal element into the anti-extrusion delta backup. The applied force deflects radially in a controlled manner, closing the extrusion gap behind the sealing lip, achieving maximum sealing effectiveness.



Elastomer Sealing Element

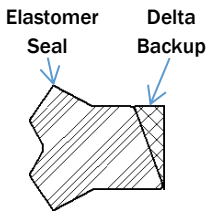
The unique sealing lip profile provides the accurate designed interference for low pressure conditions. The bottom side of the seal is designed to accommodate the delta backup. We offer several hysteresis resistant rubber compounds per your specific application. The most common are:

HNBR	High abrasion resistance, excellent compression set properties, wide temperature range Temperature range -30 to 325°F (-35 to 164°C)
FKM	Low compression set properties, chemical and heat resistance Temperature range -20 to 400°F (-29 to 205°C)
FFKM	Inherent resistance to aggressive chemicals with wide range of service temperature Temperature range 10 to 500°F (-12 to 260°C)

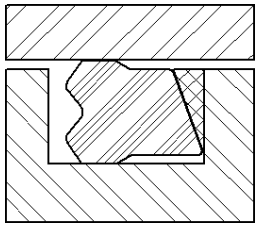
Delta Backup

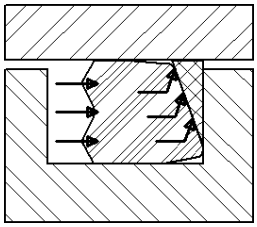
With the geometry of the Delta Backup and the bottom of the rubber seal element, the exertion of pressure positively actuates the Delta Backup to the extrusion gap. The split Delta design allows ease of installation and retains original seal height and groove depth. We offer several engineered plastics per your specific application. The most common are:

PTFE (Virgin and Filled)	Low friction and chemical resistant material with wide temperature range Temperature range -100 to 450°F (-73 to 232°C)
PEEK	Superior creep resistance, chemical resistant and wide temperature range Temperature range -94 to 482°F (-70 to 250°C)
Acetal	Lowest cost alternative, tough and rigid with high modulus of elasticity but limited temperature range and difficult to install in small closed glands Temperature range -40 to 250°F (-40 to 120°C)



Free


Installed


Under Pressure

Typical Applications: Hydraulic Jars; High Performance Shock Absorbers - Cars/Trucks, Bicycles, Motorcycles, ATVs/UTVs, Snowmobiles; Oil & Gas High-Pressure Downhole Tools; Chemical/Fluid Metering and Injection Equipment; Valve Stem Seals; and any Low-Profile Dynamic/Oscillating Applications

Application Size: From 0.125" to 12.000" ID with cross sections of 0.125" to 0.500"