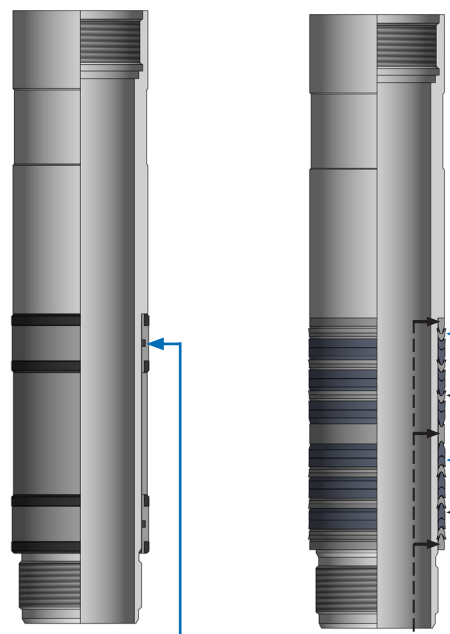



# SEAL INFORMATION SHEET



**CHEVRON SEAL STACKS ARE AVAILABLE FOR HIGH TEMPERATURE SEALING CAPABILITY.**  
 A collection of seals and spacers provides high pressure sealing capability at higher temperatures. The seal stacks are arranged in opposing pairs that allow them to seal from both directions using multiple redundant seals.



**CHEVRON SEALS, OR "V" SEALS**  
 are seals designed to have an interference fit with the Seal Mandrel and a sealing surface so seals develop at the points of interference. The seal is only present when pressure comes from the direction of the "V". This is why Chevron Seals are usually used in opposing directional sets. They are made from rubber to take advantage of the elastomeric properties needed to form a low pressure (and high pressure) seal. Chevron seals are available in Viton and Aflas.




**BONDED SEALS ARE DESIGNED TO BE GENERAL PURPOSE SEALS.**  
 Rubber bonded to the seal is designed to have an interference fit with a sealing surface so a seal develops at the point of interference. The Bonded Seals also have an O-ring inside to eliminate any leak path under the Bonded Seal. Generally there are two Bonded Seals to a seal unit but this can be changed if desired. Bonded Seals are available in Nitrile, HNBR (HSN), and Viton with the O-ring matching the rubber type.

**TEFLON SEALS**  
 are a soft plastic seal with a slight interference with the Seal Mandrel and sealing surface. They act as a secondary seal to Chevron Seals and as an anti-extrusion device for the elastomer seal above them in a seal stack.

**RYTON SPACERS**  
 are a hard plastic spacer that provides extrusion resistance to the elastomeric and plastic seals above them in a seal stack. They do not form a seal but help restrict damaging extrusion to the seals.

**SEAL SPACERS**  
 hold the seals in the proper arrangement and keep the seal sets from interfering with one another. Seal Spacers are generally made from carbon steel but can be made from other steels where needed.



SEAL	TEMPERATURE RATING	OPERATING ENVIRONMENT(S)
Bonded Nitrile	250° F	General Duty, Seal Unloading, Wiper Seal
Bonded HSN (HNBR)	300° F	Medium Duty, Seal Unloading, ED Applications
Bonded Viton	350° F	Heavy Duty, Seal Unloading, ED Applications
VTR Stack	350° F	Heavy Duty, Corrosive Environments, ED Applications
ATR Stack	400° F	HT/HP, Corrosive Environments

SEAL MANDRELS	ENVIRONMENT
Standard Steels	Oil/Gas, Steam, <.2% H <sub>2</sub> S/CO <sub>2</sub>
Nickle Plated Standard Steels	Oil/Gas, Steam, Disposal Water, < .4% H <sub>2</sub> S/CO <sub>2</sub>
Stainless/Duplex Stainless Steels	Oil/Gas, Steam, Disposal Water, < 5% H <sub>2</sub> S/CO <sub>2</sub>
Nickle Based Alloys	Oil/Gas, Steam, Disposal Chemicals, < 25% H <sub>2</sub> S/CO <sub>2</sub>

\*Elastomers available up to 650° F.