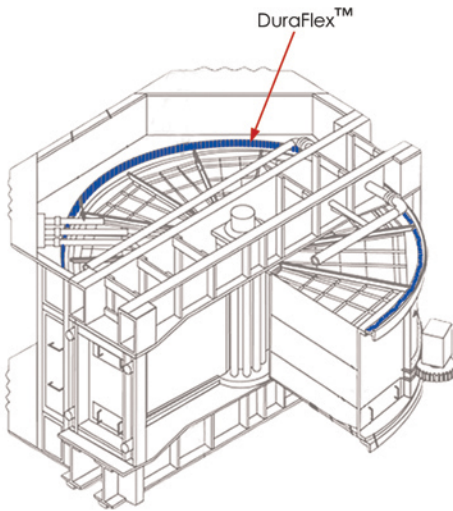


Circumferential & Bypass Sealing Solutions



Product Design



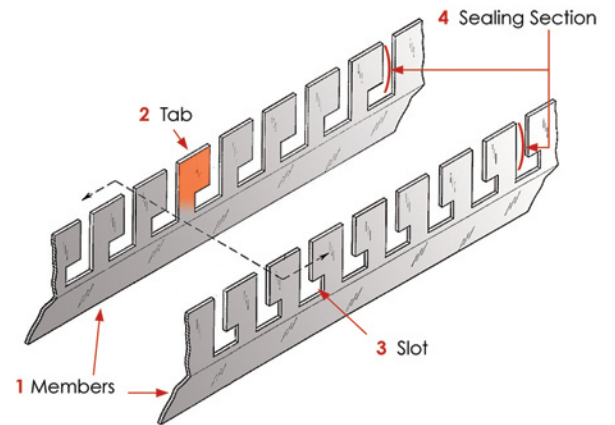
The DuraFlex™ Technology is a patented and industry proven product line exclusively designed for customers seeking to maximize the efficiency and reliability of the airheater. This product line has an unmatched track record in the industry; efficiency improvements have increased our customer productivity and significantly reduced fuel cost. The product quality is unsurpassed and customers report they last longer than any other sealing product available in the market place.

This unique interlocked and reinforced design not only provides a tight seal, it is virtually immune to the problem of torn tabs commonly experienced with OEM style seals.

DuraFlex™

The DuraFlex™ seal has two interlocking members (1) of specially shaped tabs (2) and slots (3). The tabs on the first member are positioned through the slots of the second member to provide a very strong and seamless, yet flexible, high performance sealing system. The interlocking tabs tightly cover all of the slots thus providing a gapless seal section (4) that dramatically reduces energy wasting bypass leakage.

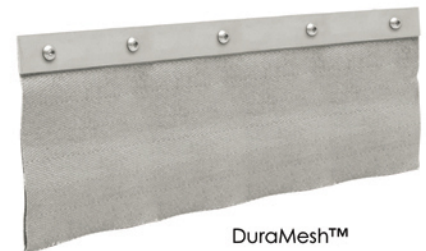
The seal is mounted either to the rotor or to the inner wall of the housing so as to extend through the bypass gap between the rotor and the inner wall of the housing.



DuraMesh™

DuraMesh™ minimizes the bypass leakage found in rotors that have become warped and are no longer round. This out-of-round condition creates additional leakage due to the gap between the moving T-Bars and the DuraFlex™ Bypass Seal. (This can be larger than the contact portion of the seal and the sealing surface.) DuraMesh™ is set on top of the DuraFlex™ seal thus extending the sealing surface up to 4 inches to address this out-of-round condition. The mesh (double thickness) is set with a slight bend to accommodate the rotor type and shape. As the airheater heats up the cloth bends even more, however it is still kept in place by the pressure of the incoming air.

The structure of the material is a stainless weave of mesh with a silicone fabric and coated with an organic high temperature proofing to make it durable, flexible and very heat resistant. The temperature in service is up to 1,250 degrees Fahrenheit.



DuraMesh™



DuraMesh™ with
DuraFlex™ Bypass Seal

Circumferential & Bypass Sealing Solutions

Overview

The DuraFlex™ bypass or circumferential seal is engineered for rotary regenerative airheaters. The DuraFlex™ seal design increases the efficiency of the plant by reducing station fan power usage, increasing the thermal efficiency of the airheater and reducing the overall net heat rate of the plant.

The circumferential seals prevent air and gas from bypassing the heating element through the space between the rotor and the housing shell. They are retained by mounting angles bolted to the circumference of the rotor. The circumferential seals wear against the sealing rings, which are welded to the housing of the airheater.



DuraFlex™ Circumferential Seal

The bypass seals are mounted on the housing and seal against the rotor mounted T-Bars. Circumferential and bypass seals are equipped in the hot and cold ends of airheaters.



DuraFlex™ Bypass Seal

DuraFlex™
An Efficient
Seal

The DuraFlex™ high-performance circumferential and bypass seals use a patented revolutionary interlocking design. This technique reduces the air gaps normally found in other circumferential or bypass sealing systems.

DuraMesh™
For Bypass
Seals

DuraMesh™ is a new idea to add to Paragon's sealing solutions. DuraMesh™ is a stainless steel mesh cloth impregnated with "clay" that compliments the bypass seals at the air and gas inlet sides of the airheater.



DuraFlex™ Flexed Seal

Product Features

The DuraFlex™ Seal provides an edge free surface that prevents seal tabs from being torn loose in the event the rotor comes in contact with the seal or a foreign object such as a clinker becoming lodged between the rotor and the seal. With standard circumferential and bypass designs, it is very common for seal tabs to be torn away thus exposing large gaps which provide paths for leakage past the airheater.

The DuraFlex™ circumferential/bypass seals have a unique design that contains two layers in one interlocking seal. This feature reduces the cost of seal replacement and installation time by half in comparison to standard circumferential/bypass seals.

