

HSC/HSR

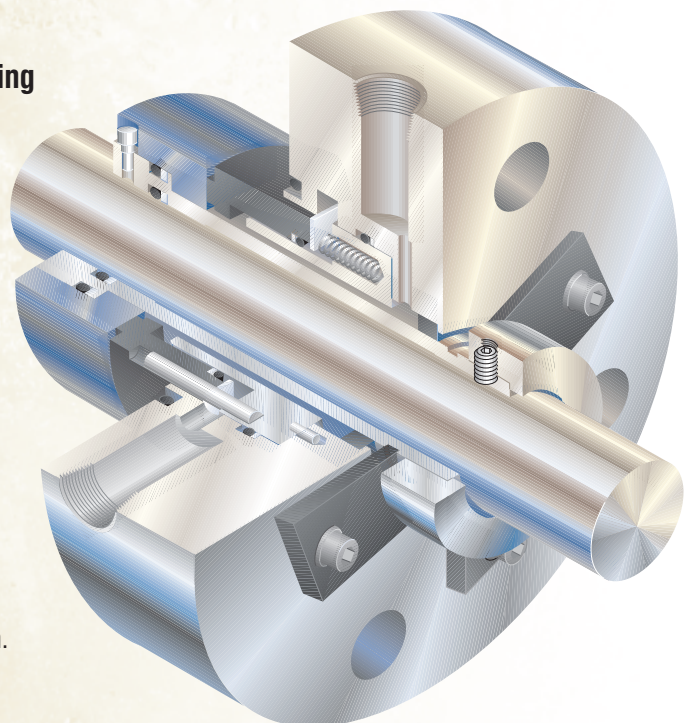
For high pressure and high speed rotating equipment. Where reliability and long life are a must in boiler feed, boiler circulation, oil field injection, and pipeline services.

Features/Benefits

- Cartridge design simplifies seal installation - All seal components are unitized on a sleeve with critical seal settings factory set.
- Engineered gland design - Precision machined to ensure correct internal component fits and external customer interfaces. Standard 0.500" NPT flush, vent, and drain connections.
- Robust seal face components - Using proven FEA techniques, seal rings are designed for optimum seal face deflection for operation in low and high viscosity fluids. Balance diameter and wear nose are both located on the stationary face to ensure that face loading and seal balance are independent of equipment dynamics.
- Drive collar provides superior torque transfer from sleeve to shaft - Constructed from low thermal expansion stainless steel to maximize shaft grip.
- Springs protected against centrifugal force - Heavy-duty springs are mounted in the stationary portion of the seal to eliminate the effects of centrifugal force during high speed operation.
- Throttle bushing provides additional safety and reliability as a back-up seal - Minimizes leakage to the atmosphere in the event of a primary seal failure.

Flexible stator design has advantages for high pressure, high temperature and high speed sealing

A "flexible stator" design is a basic seal geometry where the springs that provide the closing force necessary to keep the seal faces together are located in the stationary portion of the seal. This design protects the seal in the event of misalignment between the seal chamber face and the shaft. Conventional flexible rotor designs must compensate for misalignment with every revolution while the flexible stator design remains stationary, eliminating wear of critical seal components. This elimination of wear is especially important in high speed applications and in hot service where pump casings are thermally or hydraulically distorted and this distortion is transmitted through the gland ring. In this case, the springs act to isolate the stationary seal ring from distortion.



Operating Parameters

- Maximum Pressure*: Up to 1200 psig (82.8 bar)
- Temperature: -40°F to 400°F (-40°C to 204°C)
- Speed*: 6,500 rpm (upper limit)
- Available size: Up to 6.500" (165 mm)
(custom engineered designs available in sizes over 6.500")

Materials of Construction

- Rotating Face: Silicon Carbide
- Stationary Face: Carbon (HSC), Silicon Carbide or Tungsten Carbide (HSH)
- Secondary Seal O-Rings: Fluoroelastomer, Perfluoroelastomer

Special purpose seals and optional features:

- Available in dual pressurized or non-pressurized arrangements.

Seals for light hydrocarbons

- HSC-E seals are custom engineered designs for light hydrocarbon services (specific gravity <0.68) where there is a possibility of the product flashing to a vapor across the seal faces. Seal faces are Carbon (stationary face) vs. Silicon Carbide (rotating face).

HSH high performance seals for high pressure and high speeds

- HSH Seals are custom engineered boundary lubricated designs with hard vs. hard face material combinations. The HSH can be used where fluids contain abrasives which would cause rapid wear of carbon seal face materials.

* applications above 600 psi and /or 6000 rpm are custom engineered

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