

1810PR AND 442PR PUMPING RING SEALS

HIGH CAPACITY PUMPING RING SEALS FOR MAXIMUM HEAT REJECTION AND RELIABILITY

The Chesterton® 1810 and 442 Pumping Ring Seals are engineered to deliver exceptional reliability and performance in demanding high temperature applications. Featuring integrated pumping rings, these seals enhance fluid circulation, greatly improving cooling and lubricity—critical factors for seal longevity in extreme conditions. Built on Chesterton's proven cartridge and split designs, these seals provide efficient, long-lasting solutions that help reduce downtime, extend equipment life, and ensure consistent performance in critical operations.

Applications

- Boiler Feed
- Boiler Circulating
- Heater Drain
- Hot Hydrocarbons

Benefits

Low Cost, Highly Efficient Cooling

Pumping ring circulates only stuffing box fluid in a closed loop cooling system reducing re-heat costs.

Cooling for Ideal Face Lubrication

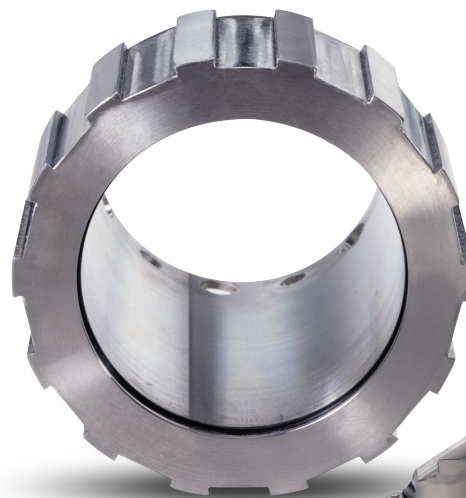
Effective cooling maintains face flatness, provides adequate liquid viscosity for seal face lubrication and prevents volatile fluids from vaporizing.

Eliminates the Need for External Injection of Cold Condensate

The need for an outside source of treated condensate is eliminated with an independent pumping system.

Thermo-siphon Cooling During Stand-by Conditions

Even when the pump is not running fluid will continue to pass through the heat exchanger, protecting the components from the damaging effects of heat.

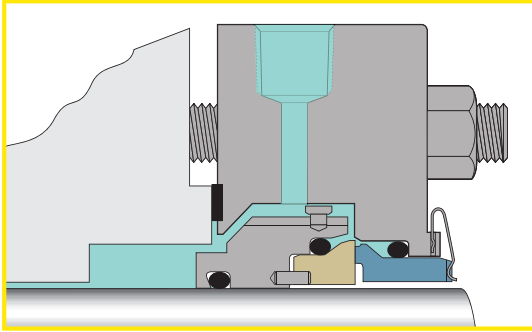


1810PR (Pumping Ring)



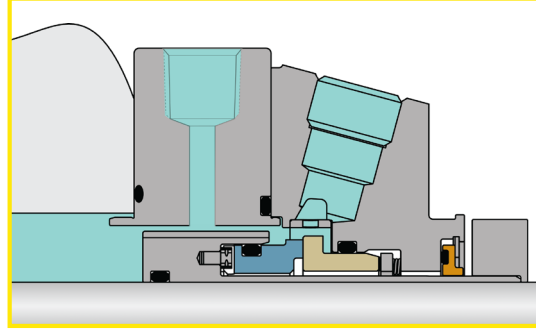
442PR (Pumping Ring)

Seal Features



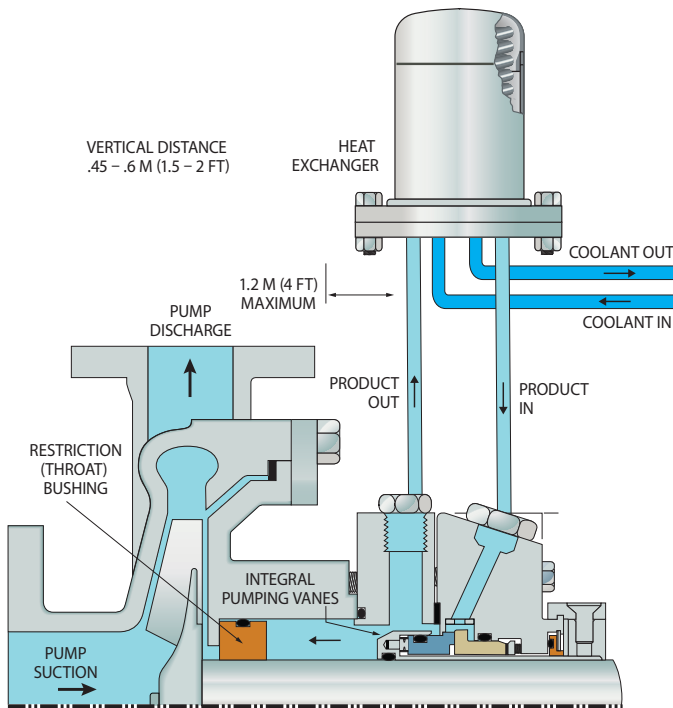
442PR Split Seal

- High-pressure ball and socket elastomers
- Patented vacuum capability
- No equipment disassembly required
- 400 psig (25 bar g)



1810PR Seal

- Multi-port injection for enhanced cooling
- Micro-polished O-Ring surfaces
- High-pressure seal faces
- Floating disaster bushing
- 600 psig (40 bar g)



Stationary Seal Design – Eliminates spring fatigue and stuffing box misalignment problems. Ideal for high speed and large equipment.

Self Centering – Squares the rotary face to the shaft for consistent reliable operation.

Non-fretting – No wear to equipment sleeves or seal components.

Monolithic Seal Faces – Provide maximum reliability over a wide range of temperatures and pressures by maintaining face flatness. Ideal face lubrication is achieved.

Compact Designs – Small space requirements and fits outside the stuffing box for ease of installation.

Field Repairable – Seal components are easily replaced using original metal parts.

High Flow Gland – Unique cut-water design to provide an ideal flow pattern for efficient seal cooling.

Chesterton ISO certificates available on chesterton.com/corporate/iso

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