

A182/A2382

HIGH RELIABILITY, LOW EMISSION MECHANICAL SEALS

API 682 QUALIFICATION TESTED
ISO 21049 COMPLIANT



LOW EMISSION, RELIABLE PERFORM

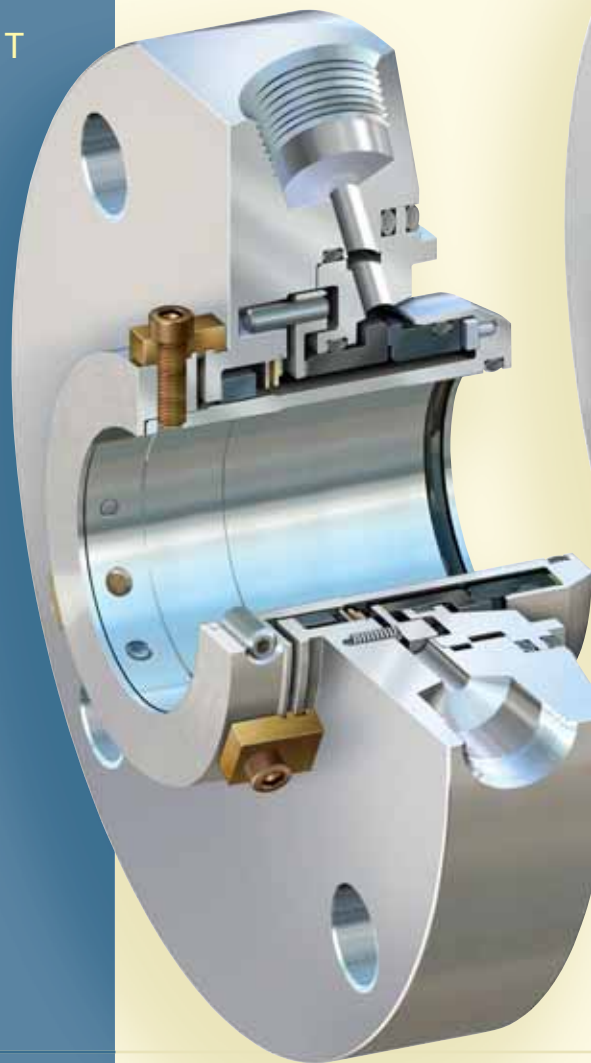
A182/A2382

API 682 QUALIFIED AND ISO 21049 COMPLIANT

Chesterton® A182 single and A2382 dual API seals are designed specifically for stringent refinery applications meeting Type A pusher seal requirements. Our superior API seal offering combines proven Chesterton technology and extensive R&D qualification testing. These innovative seal designs deliver high reliability and emission control performance.

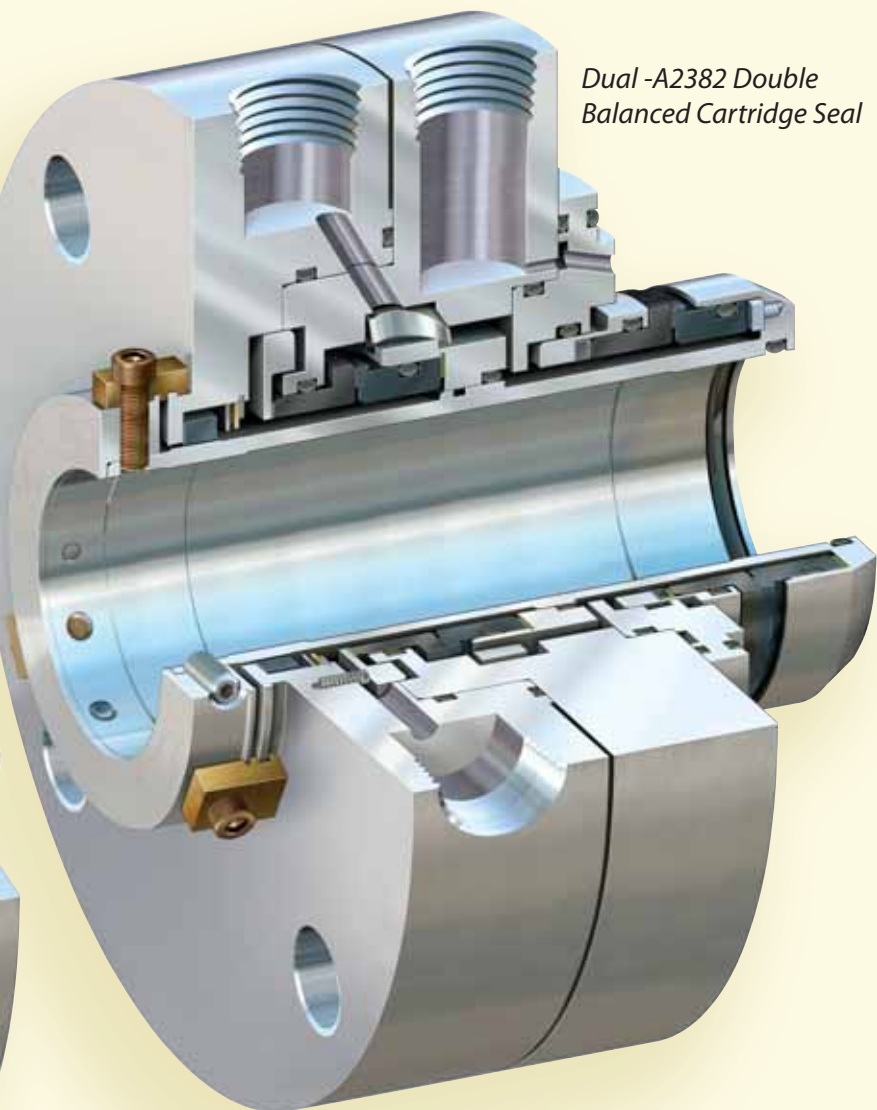
This series of API seals provide a versatile approach to refinery, chemical and petrochemical sealing. The A182 single seal meets tough emissions requirements through advanced seal face design and low heat generation. The A2382 is a double balanced seal design accepting pressure reversals. This innovative design approach simplifies seal selection and improves standardization throughout the plant.

*Single -A182
Cartridge Seal*



Reasons to use the A182 and A2382 seals

- Dual seal designed for reverse pressure capability
- Optimized face flatness for higher controlled emission levels
- High performance features that compliment API reliability programs
- Multiport injection for improved face cooling
- Superior responsiveness with micropolished O-ring surfaces
- Thermal management with positive circulating device



Dual -A2382 Double
Balanced Cartridge Seal

■ Multiport Injection

A standard offering on the single and dual seals, the distributed flush arrangement maximizes cooling by evenly circulating flush fluid to the seal interface. This reduces thermal distortion and controls emission levels.

■ Micropolished O-ring Surfaces

The O-ring travel surface is engineered to reduce the effects of aggressive fluids and high temperature sealing. O-ring hang-up and the negative effects of seal face hysteresis is eliminated.

■ Optimized Seal Balance

The Balance Piston™ enables true hydraulic double balance with no moving O-rings to hang up and fail under pressure reversals. The patented piston eliminates the needs for wide seal faces, which inherently generate excessive heat and contribute to O-ring failure.

■ Positive Circulating Device

The A2382 circulating device is designed and tested to meet the requirements of API 682. Through fluid flow analysis, maximum fluid exchange provides superior seal cooling.

■ Tandem Configuration

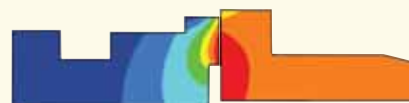
The process fluid is sealed on the outside diameter of the seal faces. Proven design for the highest reliability under varying conditions.

■ Stationary Springs

When compensating for stuffing box misalignment or extraneous installation tolerances the stationary springs will maximize reliability. The negative effects of spring fatigue is eliminated and seal faces remain closed at high shaft speeds.

■ Controlled Emission Faces

Seal face geometry is optimized through dynamic stress relief, which maintains face flatness, keeps faces closed, and controls emissions to the lowest level.



Operating Limits

Pressure**	Meets requirements covered under *API682
Temperature	-40°C to 260°C (-40°F to 500°F)
Speed	25 m/s, 5000 fpm
Size Range	20mm (.875") to 120mm (4.75")
Standards	Meets ISO 13709, cat. 2 and 3

* For operating limits covered under the Engineered Seal category contact Chesterton Application Engineering.

** Seal pressure capabilities are dependent on the fluid sealed, temperature, speed, and seal face combinations.

Standard Materials of Construction

Hardware	316 Stainless Steel (EN 1.4401)
Rotating Face	Premium grade carbon/ Tungsten Carbide/Silicon Carbide
Stationary Face	Silicon Carbide
Secondary Seals	Fluoroelastomer (FKM), Perfluoroelastomer (FFKM)
Springs	Hastelloy™ C***
Throttle Bushing	Floating carbon design

*** Haynes International, Inc. registered trademark.



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