

1810 AND 2810 HEAVY-DUTY MODULAR CARTRIDGE SEALS

BUILT ON CHESTERTON'S AXIUS™ MODULAR PLATFORM
CUSTOMIZABLE TO MEET PLANT-WIDE APPLICATIONS



Customization Benefits

- Increased productivity with easy custom seal configuration
- Standardized seal installation procedures
- Low emission sealing
- Long-term reliability in the most demanding applications
- ViewIn™ enabled for fast seal identification during operation



Reliability Simplified

SEAL CONFIGURATION TO MEET YOUR NEEDS



Chesterton's next-generation mechanical seals are built on the AXIUS™ modular platform, which allows you to configure only the seal capabilities you need around a universal base. This modularity helps keep your operation agile and lowers life cycle costs.

Each seal can be customized quickly and easily to suit your application. This flexibility allows you to make reconfigurations quickly, even in the field, to meet the changing demands of your process. You can easily upgrade during overhaul to improve performance and extend production time; there's no need to buy a different seal.



Introduce new levels of seal reliability for your changing application demands—quickly and easily.

1810 Heavy-Duty Modular

Chesterton's 1810 is a scalable, plant-wide mechanical sealing solution that can be used in a variety of pumps. From standard applications to your most demanding processes, 1810 can be configured for maximum performance.

- Reliable – A long-lasting robust sealing solution
- Economical – Only pay for the features your process demands
- Field repairable – Spare parts and upgrade kits are available, which can be easily installed
- Identifiable – Enabled with Chesterton ViewIn™ RFID Technology



The 1810 mechanical seal can easily be configured with several different face profiles and auxiliary components. When you need to make seal adjustments for more strenuous sealing requirements, upgrade the seal easily, even in the field, using Chesterton's on-hand kits.

1810 FACE OPTIONS TO SUIT YOUR PROCESS

Hot Process Media



The hydropad face option enhances the lubrication of the faces when sealing vaporizing process media. Seal boiler feed and condensate pumps without the need for external cooling.

Contaminated Media



The line-to-line face option provides greater sealing security in chemical slurries. The design protects against hardening and crystallization of common chemical slurries on or around seal faces.

SPECIFICATIONS

Operating Parameters

Sizes	25 mm – 200 mm 1.000" – 8.000"
Pressure	711 mm or 28" Hg Vacuum to 40 bar g (600 psig*)
Temperature	-55°C – 300°C (-67°F – 570°F) Temperature limits depend on actual elastomers used
Speed	25 m/s (5000 fpm)

Applicable Standards and Approvals

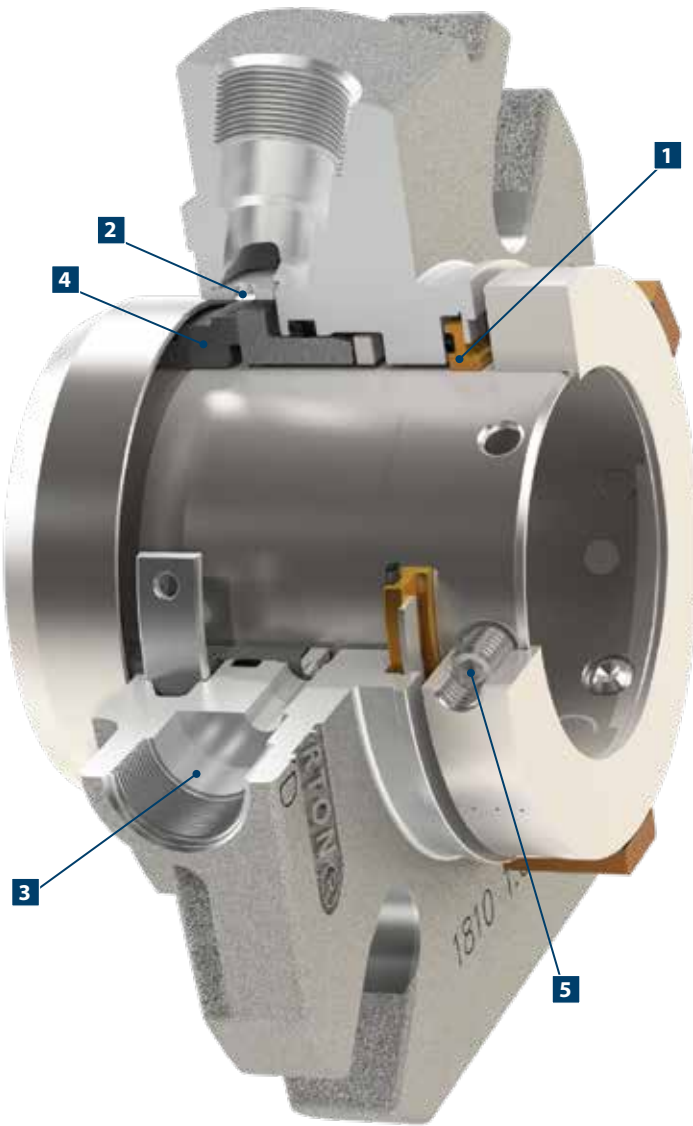
ISO-3069C, ASME B73.1, B73.2, NSF-61

*Seal pressure capabilities are dependent on the fluid sealed, temperature, speed, and seal face combinations. For operation outside the limits and additional materials consult Chesterton Mechanical Seal Engineering.

Materials of Construction

Rotary Faces	CB SSC TC
Stationary Faces	SSC TC
Elastomers	FKM EPDM FEPM FFKM
Metal Parts	316 Stainless Steel (EN 1.4401)
Springs	Alloy C-276 (EN 2.4819)

Single Cartridge Seal



1810 OPTIONAL FEATURES

- 1 Floating Bushing**
Minimizes quench and drain media loss while tracking shaft movement.
- 2 Multi-Port Injector Ring**
Allows for better control of the seal chamber temperature in the vicinity of the seal faces. Ideal for high temperatures or vaporizing fluids such as light hydrocarbons.
- 3 Quench and Drain**
Allows you to control the temperature and viscosity of the process fluid. Ideal for sealing any fluid that is going to set or harden when in contact with atmospheric conditions (such as resins, polymers, and viscous media).
- 4 Hydropad Faces**
Enhances the lubrication of the seal faces when sealing vaporizing process media.
- 5 High-Torque Drive Screws**
Ultra-tough, specially treated screws create positive, secure drive in both soft and hard shafts.

Five Key Seal Design Features



- ✓ *Balanced Design*
- ✓ *Non-Fretting*
- ✓ *Monolithic Seal Faces*
- ✓ *Stationary Design*
- ✓ *Protected Springs*

Chesterton's Five Key Seal Design Features increase seal performance and longevity in multiple applications across a wide variety of industries.

2810 Heavy-Duty Modular

Chesterton's 2810 is a double seal with advanced features that provide superior emissions control, safety, and reliability. Ideal for sealing hazardous or dangerous process fluids, the 2810 offers a high degree of control over seal operating conditions. This ability improves the seal's operating condition and lifetime.

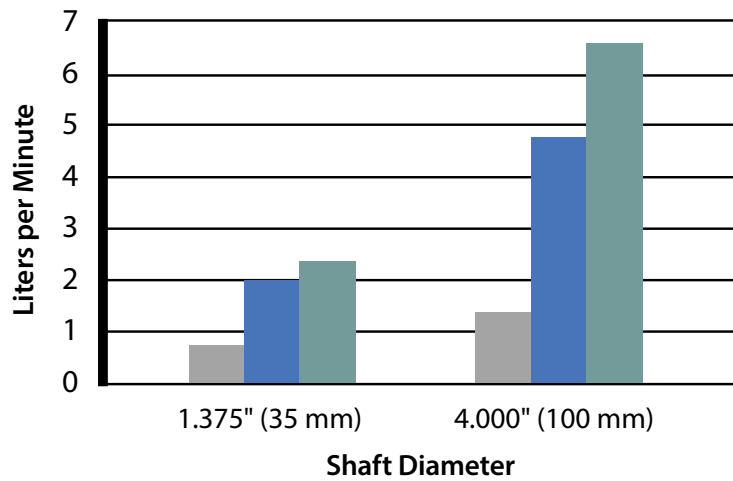
- Controllable – Lower face temperatures with patented diffuser sleeve
- Reliable – Long-lasting, heavy-duty design
- Field repairable – Spare parts and upgrade kits are available
- Identifiable – Enabled with Chesterton ViewIn™ RFID Technology



Lowering buffer/barrier temperatures increases seal life. The 2810 is the only double seal available featuring Chesterton's patented diffuser sleeve. This unique CNC-machined profile not only increases buffer/barrier fluid flow rates but also disperses the cool fluid directly at the seal face interfaces, collecting and removing the hotter fluid and transporting it back to the seal tank system.

The modular design of this seal allows for easy exchange of process contact metal components with chemically resistant materials for extended seal life in more applications.

Barrier/Buffer Fluid Flow Rates



SPECIFICATIONS

Operating Parameters

Sizes	25 mm – 200 mm 1,000" – 8,000"
Pressure	711 mm or 28" Hg Vacuum to 40 bar g (600 psig*) 17 bar g (250 psig) outboard
Temperature	-55°C – 300°C (-67°F – 570°F) Temperature limits depend on actual elastomers used
Speed	25 m/s (5000 fpm)

Applicable Standards and Approvals

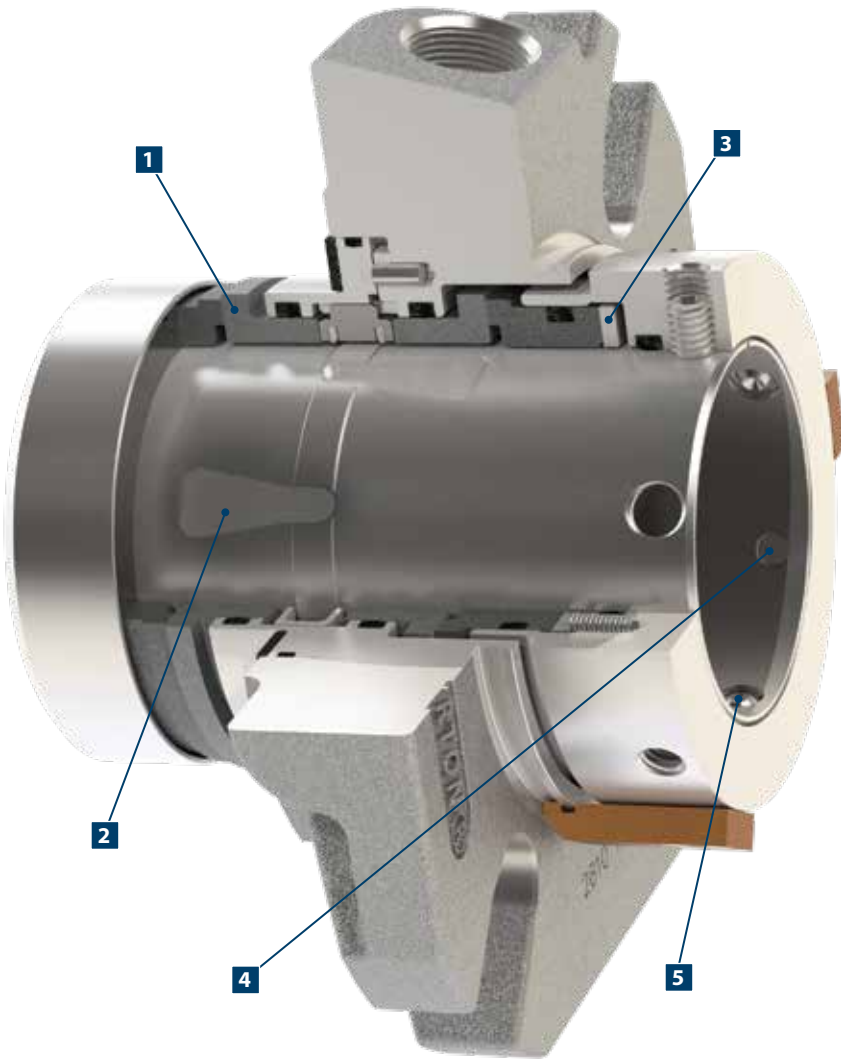
ISO-3069C, ASME B73.1, B73.2, ATEX Category I, Group 2 approved

*Seal pressure capabilities are dependent on the fluid sealed, temperature, speed, and seal face combinations. For operation outside the limits and additional materials consult Chesterton Mechanical Seal Engineering.

Materials of Construction

Rotary Faces	CB SSC TC
Stationary Faces	SSC TC
Elastomers	FKM EPDM FEPM FFKM
Metal Parts	316 Stainless Steel (EN 1.4401)
Springs	Alloy C-276 (EN 2.4819)

Double Cartridge Seal



2810 FEATURES AND BENEFITS

1 Geometric Double Balance

It is critical to keep the seal faces closed during pressure fluctuations and reversal caused by process variability. Since the 2810 uses geometric double balance, and not traditional shifting O-Ring methods, its faces remain reliably closed.

2 Diffuser Sleeve

Chesterton's diffuser sleeve achieves better seal life by reducing seal face heat buildup.

3 Unified Seal Face Alignment

A feature unique to Chesterton, the seal face interface is perpendicular to the shaft axis at all times. Axial, angular, and radial shaft movement are tolerated even at high speeds.

4 Three-Point Shaft Centering

Ensuring seal alignment with the equipment shaft improves seal performance. Our three-point centering system makes it simple.

5 High-Torque Drive Screws

Ultra-tough, specially treated screws create positive, secure drive in both soft and hard shafts.

Five Key Seal Design Features



- ✓ *Balanced Design*
- ✓ *Non-Fretting*
- ✓ *Monolithic Seal Faces*
- ✓ *Unified Seal Face Alignment*
- ✓ *Protected Springs*

Chesterton's Five Key Seal Design Features increase seal performance and longevity in multiple applications across a wide variety of industries.



Global Solutions, Local Service

Since its founding in 1884, the A.W. Chesterton Company has successfully met the critical needs of its diverse customer base. Today, as always, customers count on Chesterton solutions to increase equipment reliability, optimize energy consumption, and provide local technical support and service wherever they are in the world.

Chesterton's global capabilities include:

- Servicing plants in over 113 countries
- Global manufacturing operations
- More than 500 Service Centers and Sales Offices worldwide
- Over 1200 trained local Service Specialists and Technicians

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1810 & 2810 Brochure
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