442™ SPLIT MECHANICAL SEAL

TRUSTED RELIABILITY—SIMPLIFIED MAINTENANCE

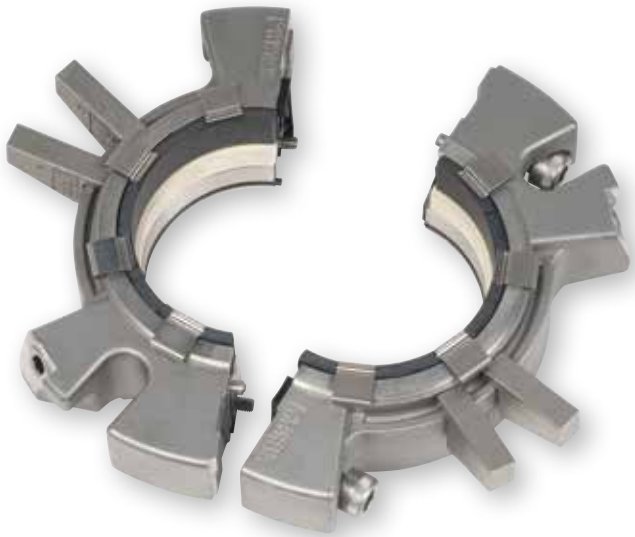
CHESTERTON®
Global Solutions, Local Service.

Innovation, Reliability, Performance

442 SPLIT SEAL ADVANTAGES

With years of reliable performance, Chesterton® split seals are used in more types of equipment, sealing various process materials, and enabling users to safely and easily return equipment to service fast.

With the largest installed base globally, our success in split sealing—even in challenging applications—attracts a wide array of users and improves plant efficiencies.



Chesterton 442 Split Mechanical Seal:

- Broad range of sizes— shaft diameters from 1 inch (25 mm) to 36 inches (900 mm)
- Easy to install/simple field repair—no glued or bonded components
- Superior performance, high pressure, and vacuum sealing
- Compact design fits most rotating equipment

The 442 split seal is ideal for equipment that is difficult and time consuming to disassemble such as large pumps, vertical pumps, and horizontal split case pumps. This proven, compact design can be used in a wide variety of equipment and process fluids.

Mixers

Pumps

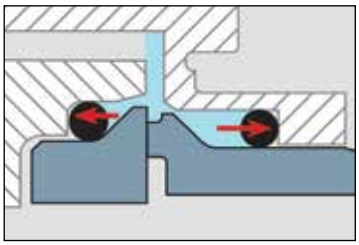
Vertical Pumps

CHESTERTON INNOVATION DELIVERS PROVEN DESIGN, SUPERIOR PERFORMANCE

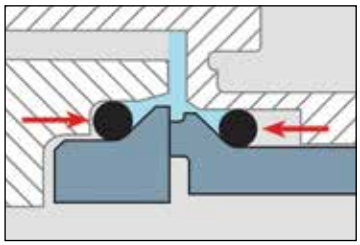
The 442 split seal has a unique adjustable gland, with captured fasteners and automatic centering, delivering unsurpassed ease of use.

442 high pressure and vacuum sealing

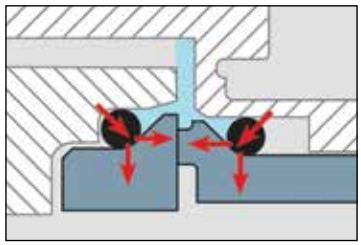
Patented ramped stationary design keeps seal face splits together under pressure and vacuum conditions, ensuring reliable sealing during pressure to vacuum shifts.



Under pressure conditions the seal ring halves are forced together.



Under vacuum conditions atmospheric pressure acts on o-rings, forcing them against the ramped surfaces of the seal faces.



Ramped surfaces cause radial and axial closing forces to keep splits together.

We raised the bar!

The 442 split seal pressure capability has been increased to 450 psig (30 bar g). Many applications currently using single cartridge seals could benefit from a 442 split seal.

Operating Conditions		Materials	
Size	20 mm – 990 mm (0.750" – 39.000")	**Faces**	CB, RSC, CR
Pressure	711 mm (28") Hg Vacuum – 30 bar g (450 psig)*	**Elastomers**	FKM, EPDM, FEPM
Temperature	120°C (250°F)	**Metals**	EN 1.4401 (316SS)
Speed	20 m/s (4000 fpm)	**Springs**	Elgiloy®

Standards and Approvals: ISO-3069-S, ASME B73.1, ASME B73.2, NSF61, ACS, ATEX

** 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.*

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.

Chesterton split seals are installed in all types of equipment and deliver years of reliable service.

Applications include

Cooling tower pumps	Condensate pumps	Stern tubes
Raw water pumps	Process pumps	Conveyors
Side entry mixers	Top entry mixers	Fans
Blenders	Bottom entry mixers	Dryers
Processing tanks	Vacuum pumps	Cookers
Fermentors	Boiler feed pumps	Water turbines

End unnecssary disassembly

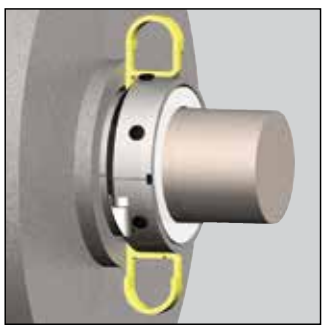
Seal replacments are easy and reliable with Chesterton's 442 split seal, saving time and reducing costs.

- Reduces install time
- Avoids coupling realignment
- Eliminates sleeve wear
- Increases equipment availability

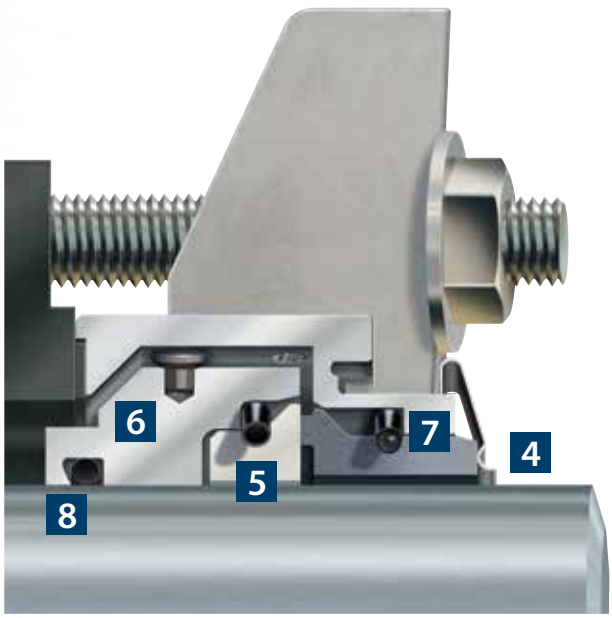
Easy to install—no complex setting

- "P" shaped spacer positions the 442 split seal for easy installation
- Ball-and-socket O-Rings seal effectively without the use of adhesives

Installation video is available to demonstrate easy installation.



442 Split Seal Innovations



1 Adjustable Gland

Smart design to suit your equipment. The adjustable gland tabs are removed during assembly, reducing the necessary clearance required with other designs. Simply attach them where your bolts are.

2 Integral Flush Ports

Combined with the adjustable gland, maximum flexibility is achieved when venting or flushing. Dual Ports are 180° apart and large diameter to maximize flush distribution.

3 Captured Fasteners

Never lose a fastner during installation. The 442 split seal's captured fastners remain in the seal's major components making installation easy.

4 Non-Clogging Springs

Address seal failures related to clogged springs. The 442 split seal's finger-springs are positioned out of the sealed fluid and allow substantial axial movement.

5 Balanced Seal Design

Generating less heat for more reliable sealing, the 442 split seal utilizes hydraulically balanced, computer-modeled seal faces.

6 Automatic Centering

No measurements required during installation. The automatic centering buttons take care of seal alignment making installation simple.

7 Compact Gland

Fits more of your equipment without the need for modification or special adaptation. The 442 split seal's low profile gland has been the most compact on the market.

8 Captive Groove Design

Unlike split seals that use hard setting adhesives, the 442 split seal uses captive grooves and ball-and-socket O-Rings to keep sealing elements clean and compliant.

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

Visit our website at chesterton.com

KEEPING THE PLANET CLEAN
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Chesterton ISO certificates available on chesterton.com/corporate/iso

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Form No. 073385
442 Brochure – English
03/21