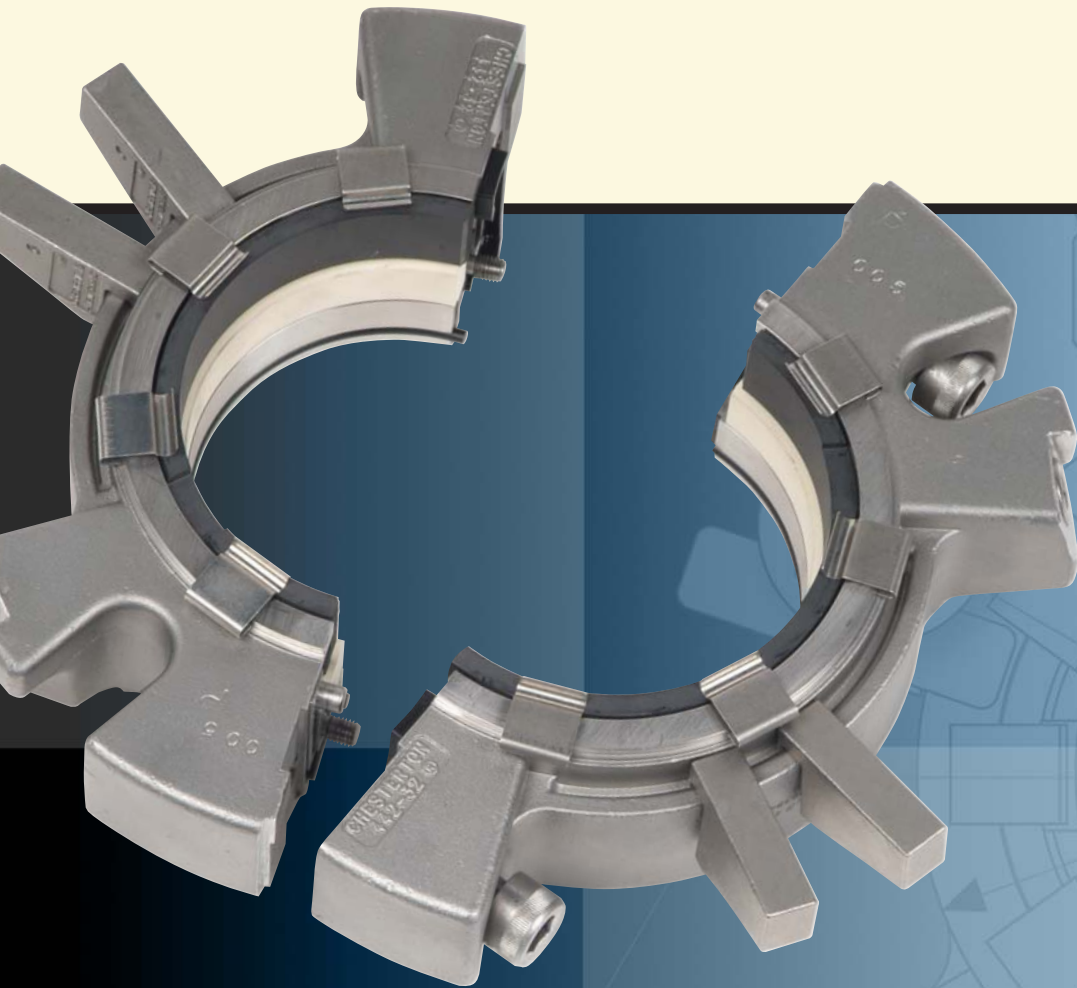


# 442™

## SPLIT MECHANICAL SEAL

HIGH PERFORMANCE — EASY TO INSTALL

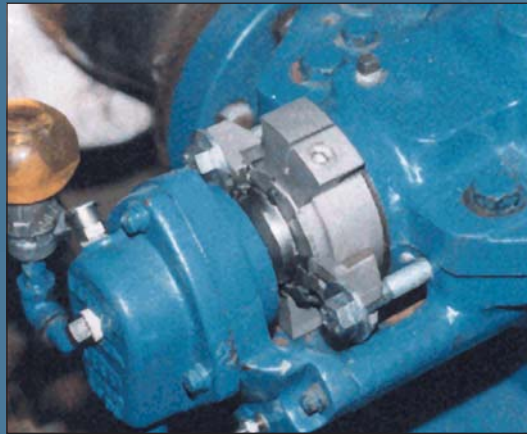


# 442

## 442™ SPLIT MECHANICAL SEAL PATENTED

### The difference is performance

CHESTERTON'S innovative industrial split seals are performance driven to seal equipment while avoiding costly downtime. Features such as easy installation, simple field repair, and superior performance sealing, both positive pressure and vacuum, have made Chesterton split mechanical seals the largest installed base of industrial split seals in the world.



- Easy to install/simple field repair—no glued or bonded components
- Superior performance, high pressure, and vacuum sealing
- Broad range of sizes—designed to fit common rotating equipment

## Chesterton is the world leader in split seal technology with the largest installed base globally

*Chesterton split seals are installed in all types of equipment and deliver years of reliable service. Our split seals are installed on rotating equipment from 1-inch to 24-inch shaft diameters.*

### No need to disassemble your equipment

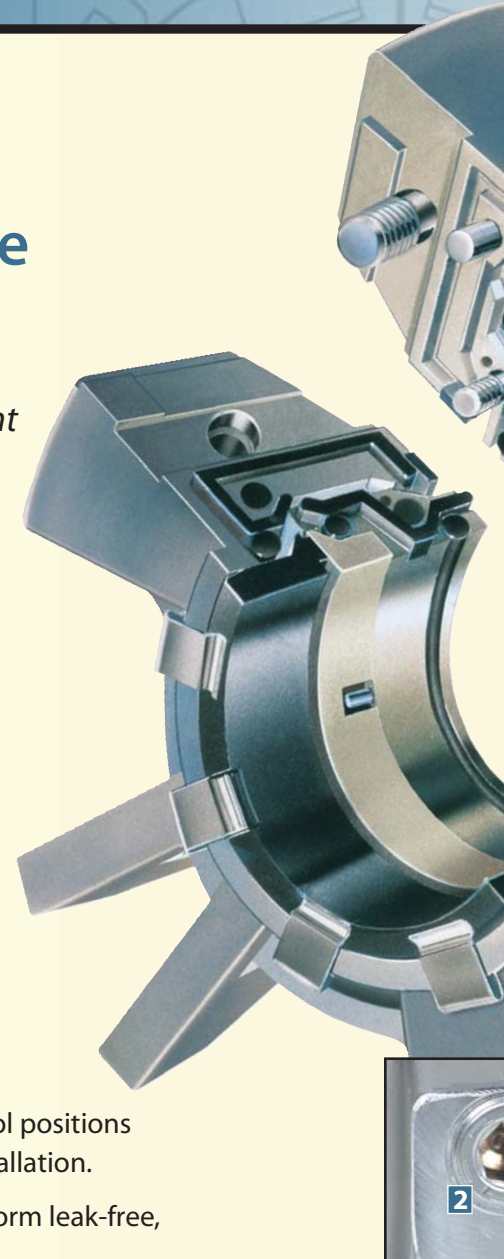
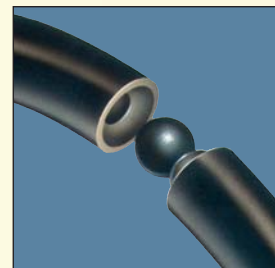
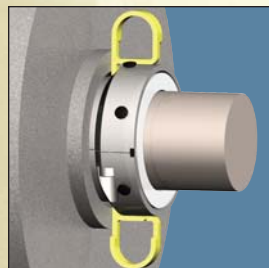
Chesterton's 442 Split Mechanical Seal offers reliable sealing with minimal downtime.

- No special lifting equipment
- No worn sleeve replacement
- No coupling realignment

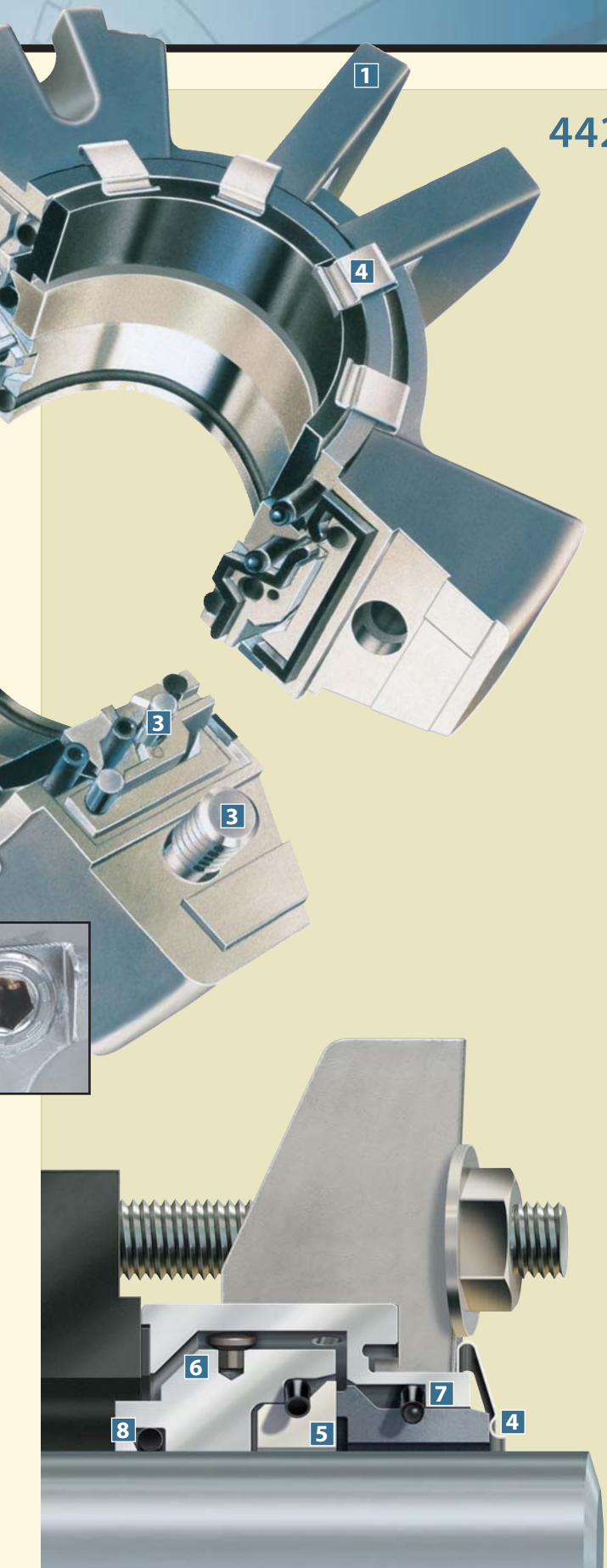
### Easy to install

- "P" shaped alignment tool positions the 442 seal for easy installation.
- Ball-and-socket o-rings form leak-free, locked units.

*Installation video is available to demonstrate easy installation.*







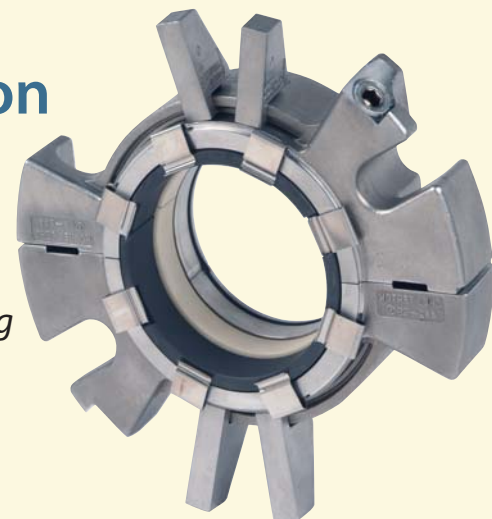
## 442 Split Seal Innovations

- 1 Patented Adjustable Gland™**  
 Patented adjustable gland tabs fit your equipment bolt position. Easy adjustment avoids “special order” gland designs necessary with other split seals.
- 2 Integral Flush Ports**  
 Dual flush ports, located 180° apart and combined with the adjustable gland, give maximum flexibility when venting or flushing for more reliable sealing.
- 3 Patented Captured Fasteners**  
 Captured fasteners remain in the 442 seal housings when disassembled. Captured fasteners avoid loss or damage during installation.
- 4 Non-Clogging Springs**  
 Non-clogging finger springs, positioned out of the sealed fluid, avoid clogging while allowing substantial axial shaft movement.
- 5 Balanced Seal Design**  
 Hydraulically-balanced, computer-modeled seal face design generates less heat for more reliable sealing.
- 6 Patented Automatic Centering**  
 Centering buttons align the rotating element inside the seal gland. Automatic centering delivers simplified installation.
- 7 Compact Gland Profile**  
 The 442 seal’s low profile gland fits more equipment without the need for modification or special adaptation.
- 8 Captive Groove Design**  
 The 442 seal’s captive o-ring groove holds the split shaft o-ring in place, without adhesives, to simplify installation and field repair.

# PERFORMANCE

## Chesterton's patented innovation drives performance

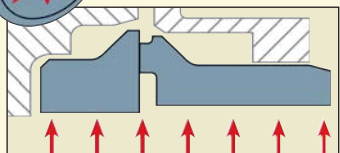
*The 442's unique, patented adjustable gland, captured fasteners, and automatic centering deliver uncompromising performance, reliability, and ease of use.*



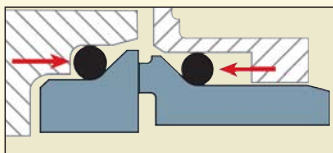
### 442 high pressure and vacuum sealing



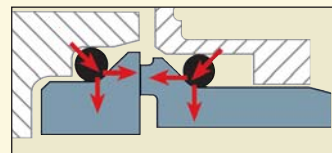
**Patented ramped stationary design** keeps seal faces together under pressure and vacuum conditions, ensuring reliable sealing during pressure transitions/shifts.



*Atmospheric pressure acts on inside diameter to separate split seal faces.*



*Atmospheric pressure acts on o-rings, forcing them against ramped surface of seal faces.*



*Ramped surface causes 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). This is over two times greater than most split seals, enabling the use of the 442 in a much larger application base.



### Materials of Construction

Component	Standard Materials
Rotary Face	Ceramic Silicon Carbide
Stationary Face	Carbon Duplex Carbide™ Silicon Carbide
Elastomers	AFLAS™ Ethylene Propylene Fluorocarbon
Spring	Elgiloy™
Metal Parts	316 Stainless Steel

### Operating Parameters

Pressure*	28" (710 mm) Hg to 450 Psig (30 bar g)
Temperature	To 250°F (120°C)
Speed	To 4000 fpm (20 m/s)
Size	1.250" (32 mm) to 7.750" (195 mm)

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

*Consult Chesterton Engineering for applications exceeding published operating parameters and additional seal sizes.*



## GLOBAL SOLUTIONS, LOCAL SERVICE

Since 1884, Chesterton has been providing value driven solutions to meet industry's needs. Chesterton solutions have been implemented around the world with documented success and recognition. Increasing equipment reliability, optimizing energy consumption, and providing local technical support and service are what Chesterton offers industry worldwide.

- Servicing plants in over 100 countries
- Global manufacturing operations
- Over 500 Sales Offices and Service Centers worldwide
- Over 1200 trained local service specialists and technicians

Visit our website at  
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ISO certifications available on [www.chesterton.com/corporate/iso](http://www.chesterton.com/corporate/iso)

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