

CHESTERTON®

ISO 9001
CERTIFIED

Bearing Protection

Patented

***Break the cycle
of lip seal related downtime!
Extend pump MTBPM***



The new standard for reliability

GBSFace Seals seal out virtually all external sources of contamination for maximum protection.

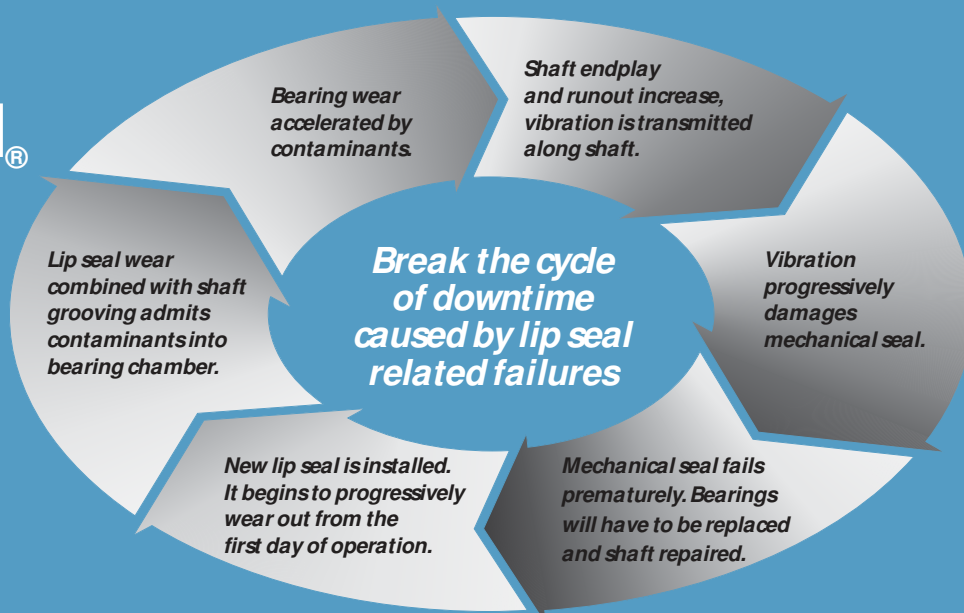
Labyrinth Seals for long-term, cost-effective protection in less demanding applications.

Break the cycle of downtime caused by lip seal related failures.

Keep all your equipment up and running without repetitive bearing failures.

CHESTERTON®

Bearing Protection

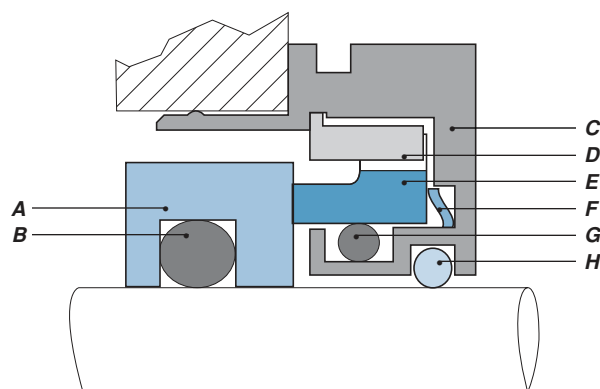


CHESTERTON®

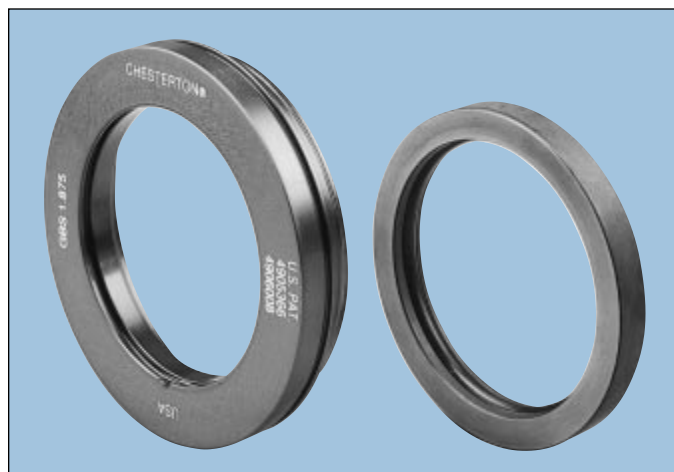
GBS Face Seal

Patented

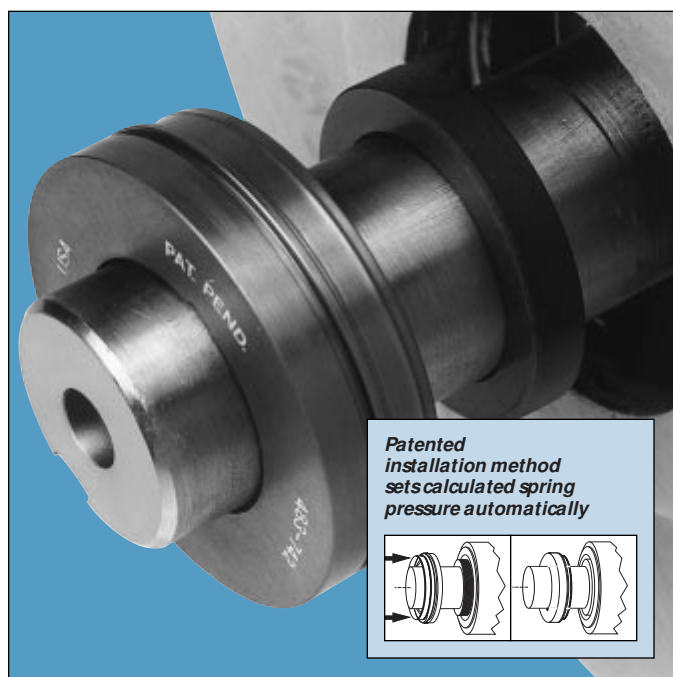
- Where immersion of the equipment may occur.
- Where moisture is continuous or condensing.
- Where hermetic sealing of the bearing chamber is required.
- Where oil levels approach the shaft diameter, requiring positive containment.



- | | |
|---------------------------|----------------------|
| A – Rotary face | E – Stationary face |
| B – Positive drive O-ring | F – Spring |
| C – Seal housing | G – Secondary O-ring |
| D – Retainer | H – Excluder ring |



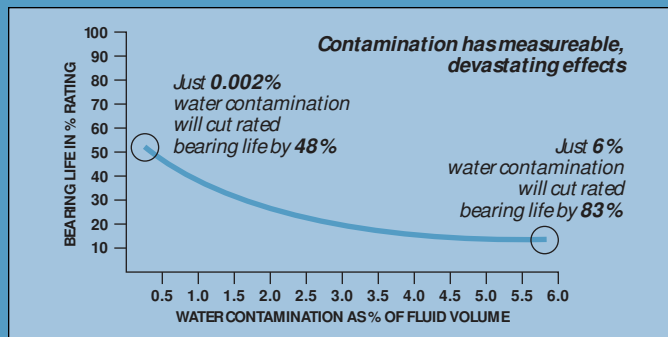
- Positively seals out all external sources of contamination.
- Will not fret, wear or damage shafts.
- Minimizes lubricant additions to bearing housings.
- No venting required, can be used with breather plug or expansion chamber.
- Self lubricating, narrow, carbon face can run dry, generates low heat, will not harm oil.
- Holds positive pressure up to 15 psi (1bar) in bearing housing. Friction drive rotary stays in place.
- Sizes from 0.875" to 4.5" (25 – 100 mm) shaft diameter.
- Metal Components: Aluminum.



The use of simple lip seals in process pump applications creates a vicious cycle of unnecessary downtime, with short MTBPM. From day one, lip seals begin to groove the shaft, progressively losing their compressive seal as well as damaging the shaft. After just three months on average, a lip seal has totally lost effectiveness. In the meantime, contaminants have begun to do the damage that can all too often result in premature mechanical seal failure, bearing failure and pump shutdown.

As shown in the chart at right, it doesn't take very much contamination to do serious bearing damage and subsequent reduction in MTBPM. CHESTERTON Bearing Protectors can break the cycle by preventing contamination from occurring.

In addition to causing pump failures, bearing failures cause up to 50% of compressor breakdowns, and up to 80% of motor breakdowns. Use the superior protection offered by CHESTERTON Bearing Protectors to help keep all your rotating equipment up and running.



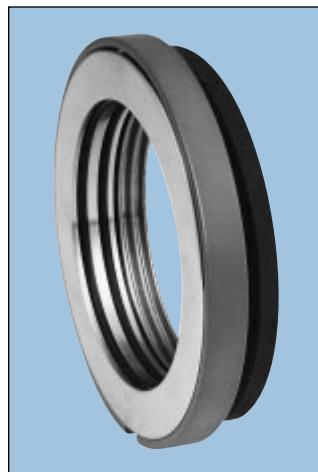
From in-depth study published in the *Journal of the American Society of Lubrication Engineers*.

CHESTERTON® Labyrinth Seal

Patented

For less demanding applications

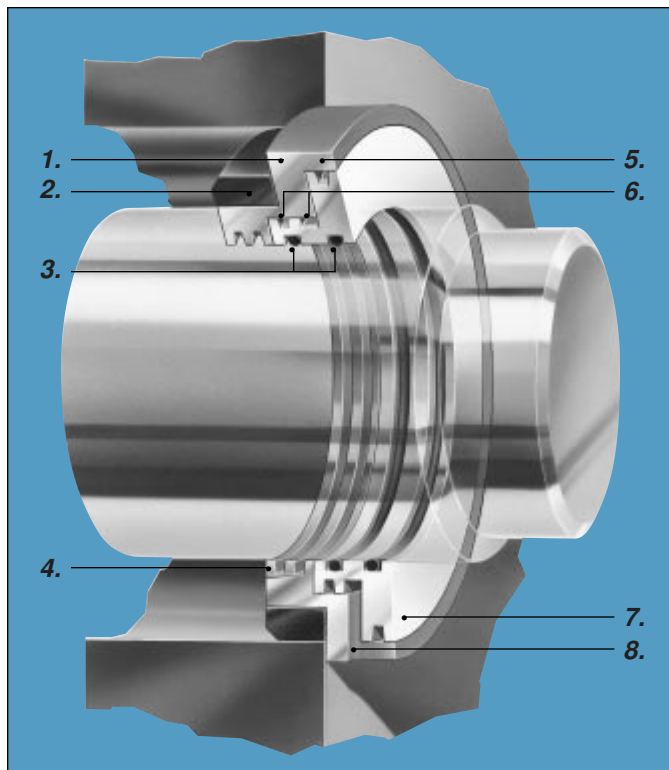
- Where immersion of the equipment will not occur.
- Where moisture is not continuous or condensing.
- Where hermetic sealing of the bearing chamber is not required.



- Tortuous path labyrinth with hooded design prevents direct penetration of liquid or dirt.
- Non-contacting and non-wearing parts for virtually unlimited life.
- Designed to withstand direct spray of 70 psi (5 bar) water for 45 minutes with no detectable leakage into bearing frame.
- Gravity drain allows liquid entering labyrinth to safely drain.
- Internal oil drain returns oil to bearing frame.

- Positive O-Ring shaft drive on rotary element.
- No shaft speed limitation – the higher the shaft speed, the better it works.
- Sizes from 0.875" to 4.5" (25–110 mm) shaft diameter.
- Metal Components: Nickel plated steel and 316SS.

1. **Stationary element:** nickel plated steel
2. **Mounting ring:** secure mounting without equipment alterations
3. **Positive O-rings:** non-slip, will not fret or damage shaft
4. **Oil drain:** helps retain lubricant in bearing housing
5. **Hooded design:** prevents direct penetration of dripping fluids
6. **Labyrinth:** traps liquid contaminants and directs to gravity drain
7. **Rotary element:** 316 stainless steel for corrosion resistance, acts as sling when rotating
8. **Gravity drain:** allows liquid trapped by labyrinth to safely exit



Bearing Protection – Size Availability

CHESTERTON® GBS Face Seals

| SHAFT DIAMETER INCH | HOUSING BORE DIAMETER | | | | |
|---------------------------|-----------------------|--------------|-------|-------|-------|
| | WITHOUT REDUCER | WITH REDUCER | | | |
| 0.875 | 1.500 | 1.625 | 1.750 | 1.875 | 2.000 |
| 1.000 | 1.625 | 1.750 | 1.875 | 2.000 | 2.125 |
| 1.125 | 1.750 | 1.875 | 2.000 | 2.125 | 2.250 |
| 1.250 | 1.875 | 2.000 | 2.125 | 2.250 | 2.375 |
| 1.375 | 2.000 | 2.125 | 2.250 | 2.375 | 2.500 |
| 1.500 | 2.125 | 2.250 | 2.375 | 2.500 | 2.625 |
| 1.625 | 2.250 | 2.375 | 2.500 | 2.625 | 2.750 |
| 1.750 | 2.375 | 2.500 | 2.625 | 2.750 | 2.875 |
| 1.875 | 2.500 | 2.625 | 2.750 | 2.875 | 3.000 |
| 2.000 | 2.625 | 2.750 | 2.875 | 3.000 | 3.125 |
| 2.125 | 2.750 | 2.875 | 3.000 | 3.125 | 3.250 |
| 2.250 | 2.875 | 3.000 | 3.125 | 3.250 | 3.375 |
| 2.375 | 3.000 | 3.125 | 3.250 | 3.375 | 3.500 |
| 2.500 | 3.125 | 3.250 | 3.375 | 3.500 | 3.625 |
| 2.625 | 3.375 | 3.500 | 3.625 | 3.750 | 3.875 |
| 2.750 | 3.500 | 3.625 | 3.750 | 3.875 | 4.000 |
| 2.875 | 3.625 | 3.750 | 3.875 | 4.000 | 4.125 |
| 3.000 | 3.750 | 3.875 | 4.000 | 4.125 | 4.250 |
| 3.250 | 4.000 | 4.125 | 4.250 | 4.375 | 4.500 |
| 3.375 | 4.125 | 4.250 | 4.375 | 4.500 | 4.625 |
| 3.500 | 4.250 | 4.375 | 4.500 | 4.625 | 4.750 |
| 3.750 | 4.500 | 4.625 | 4.750 | 4.875 | 5.000 |
| 4.000 | 4.750 | 5.000 | 5.250 | 5.500 | 5.750 |
| 4.500 | 5.250 | 5.375 | 5.500 | 5.625 | 5.750 |

| SHAFT DIAMETER METRIC/mm | HOUSING BORE DIAMETER | | | | |
|--------------------------------|-----------------------|--------------|-----|-----|----|
| | WITHOUT REDUCER | WITH REDUCER | | | |
| 25 | 47 | 52 | 55 | 56 | 62 |
| 30 | 47 | 52 | 55 | 56 | 62 |
| 35 | 52 | 56 | 62 | | |
| 38 | 55 | 60 | 62 | | |
| 40 | 60 | | | | |
| 42 | 62 | 72 | | | |
| 45 | 65 | 72 | | | |
| 50 | 68 | 72 | 80 | | |
| 55 | 78 | 85 | | | |
| 60 | 80 | 85 | 90 | | |
| 65 | 82 | 88 | 90 | 95 | |
| 70 | 90 | 100 | | | |
| 75 | 100 | 105 | 115 | | |
| 80 | 100 | 105 | 115 | | |
| 85 | 105 | 110 | | | |
| 87 | 105 | 110 | | | |
| 95 | 115 | | | | |
| 100 | 120 | 125 | 130 | 135 | |

CHESTERTON® Labyrinth Seals

| SHAFT DIAMETER INCH | HOUSING BORE DIAMETER | | | | |
|---------------------------|-----------------------|--------------------|-------|-------|-------|
| | WITHOUT MTG. RING | WITH MOUNTING RING | | | |
| 0.875 | 1.250 | 1.375 | 1.500 | 1.625 | 1.750 |
| 1.000 | 1.375 | 1.500 | 1.625 | 1.750 | 1.875 |
| 1.125 | 1.500 | 1.625 | 1.750 | 1.875 | 2.000 |
| 1.250 | 1.625 | 1.750 | 1.875 | 2.000 | 2.125 |
| 1.375 | 1.750 | 1.875 | 2.000 | 2.125 | 2.250 |
| 1.500 | 1.875 | 2.000 | 2.125 | 2.250 | 2.375 |
| 1.625 | 2.125 | 2.250 | 2.375 | 2.500 | 2.625 |
| 1.750 | 2.250 | 2.375 | 2.500 | 2.625 | 2.750 |
| 1.875 | 2.375 | 2.500 | 2.625 | 2.750 | 2.875 |
| 2.000 | 2.500 | 2.625 | 2.750 | 2.875 | 3.000 |
| 2.125 | 2.625 | 2.750 | 2.875 | 3.000 | 3.125 |
| 2.250 | 2.875 | 3.000 | 3.125 | 3.250 | 3.375 |
| 2.375 | 2.875 | 3.000 | 3.125 | 3.250 | 3.375 |
| 2.500 | 3.000 | 3.125 | 3.250 | 3.375 | 3.500 |
| 2.625 | 3.250 | 3.375 | 3.500 | 3.625 | 3.750 |
| 2.750 | 3.500 | 3.625 | 3.750 | 3.875 | 4.000 |
| 2.875 | 3.750 | 3.875 | 4.000 | 4.125 | 4.250 |
| 3.000 | 3.750 | 3.875 | 4.000 | 4.125 | 4.250 |
| 3.125 | 4.000 | 4.125 | 4.250 | 4.375 | 4.500 |
| 3.250 | 4.000 | 4.125 | 4.250 | 4.375 | 4.500 |
| 3.312 | 4.125 | 4.250 | 4.375 | 4.500 | 4.625 |
| 3.375 | 4.125 | 4.250 | 4.375 | 4.500 | 4.625 |
| 3.500 | 4.375 | 4.500 | 4.625 | 4.750 | 4.875 |
| 3.625 | 4.375 | 4.500 | 4.625 | 4.750 | 4.875 |
| 3.750 | 4.375 | 4.500 | 4.625 | 4.750 | 4.875 |
| 3.875 | 4.875 | 5.000 | 5.125 | 5.250 | 5.375 |
| 4.000 | 4.875 | 5.000 | 5.125 | 5.250 | 5.375 |
| 4.125 | 5.125 | 5.250 | 5.375 | 5.500 | 5.625 |
| 4.250 | 5.125 | 5.250 | 5.375 | 5.500 | 5.625 |
| 4.312 | 5.375 | 5.500 | 5.625 | 5.750 | 5.875 |
| 4.375 | 5.375 | 5.500 | 5.625 | 5.750 | 5.875 |
| 4.500 | 5.375 | 5.500 | 5.625 | 5.750 | 5.875 |

| SHAFT DIAMETER METRIC/mm | HOUSING BORE DIAMETER | | | | |
|--------------------------------|-----------------------|--------------------|-----|-----|-----|
| | WITHOUT MTG. RING | WITH MOUNTING RING | | | |
| 25 | 35 | 38 | 40 | 47 | 52 |
| 30 | 47 | 50 | 52 | 55 | 56 |
| 35 | 47 | 50 | 52 | 55 | 56 |
| 38 | 52 | 55 | 60 | 62 | |
| 40 | 52 | 55 | 60 | 62 | |
| 42 | 55 | 62 | 64 | 65 | 72 |
| 45 | 60 | 65 | 68 | 72 | |
| 50 | 65 | 68 | 70 | 72 | 80 |
| 55 | 70 | 78 | 80 | 85 | |
| 60 | 75 | 80 | 82 | 85 | 90 |
| 65 | 82 | 85 | 88 | 90 | 95 |
| 70 | 85 | 90 | 100 | | |
| 75 | 100 | 105 | 115 | | |
| 80 | 100 | 105 | 115 | | |
| 85 | 105 | 110 | | | |
| 90 | 110 | 115 | 120 | 125 | 130 |
| 95 | 115 | 120 | 130 | | |
| 100 | 120 | 125 | 130 | 135 | |
| 110 | 130 | 140 | | | |

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