



Brush Seals: A Proven Enhancer to Labyrinth Seal Performance

Reduce leakage and increase efficiency with the patented* brush seal design from Waukesha Bearings®.

Used in a wide variety of industrial gas turbines, steam turbines and compressors, brush seals can **reduce leakage by up to 80%**. The seal's flexible, densely packed bristles bend with rotor contact to follow shaft movement with little wear and low, predictable leakage over time.

For a high-quality, long-lasting seal, rely on the experience and design expertise of Waukesha Bearings. Efficiency gains coupled with a replaceable bristle pack provide valuable savings for your critical sealing needs.

**US Patent 6,231,047*



ADVANTAGES

- Proven performance
- Low-profile design
- Replaceable bristle pack
- Easy installation
- Flexible sizing
- Modular assemblies
- Labyrinth augmentation
- Custom and reverse engineering
- Quick turnaround times



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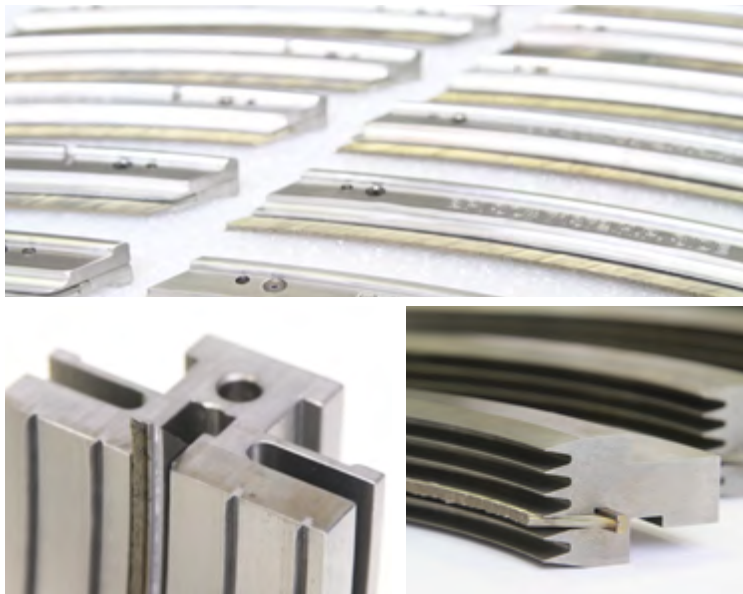
BRUSH SEAL EXPERTISE

Our brush seals originated in the aerospace industry with a major brush seal innovator. Since 2008, we have built upon that innovator's proven, high-quality product, manufacturing methods and engineering know-how to serve the needs of industrial markets around the globe.

With a growing installation list of more than 1,600 units, our brush seals are continually chosen for demanding applications.

IDEAL APPLICATIONS

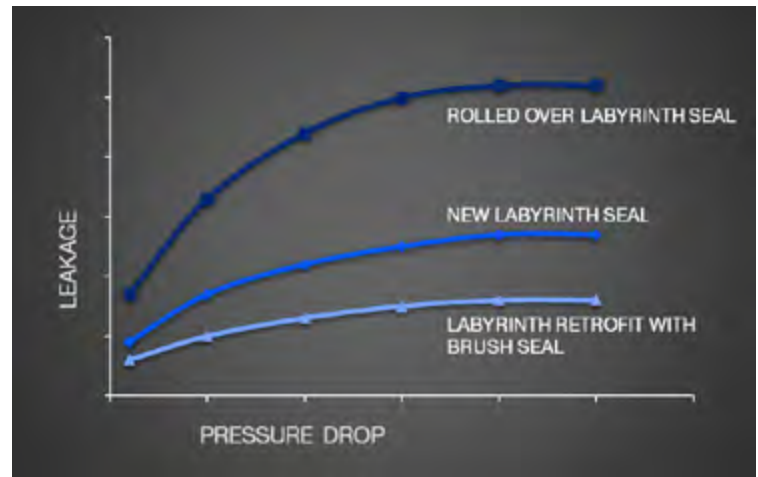
- **Industrial gas turbines:** Bearing, high pressure packing (HPP) and interstage sealing
- **Steam turbines:** Low pressure (LP), intermediate pressure (IP) and high pressure (HP) packing, interstage and tip sealing
- **Compressors:** Impeller eye, interstage and balance piston sealing
- **Turbomachinery utilizing active magnetic bearing systems**



CAPABILITIES

| | |
|-----------------|------------------------------------------------------------|
| Pressure: | Up to 300 psid (20 bar) per row |
| Temperature: | Up to 650°C (1,200°F) |
| Surface speed: | Up to 335 m/s (1,100 ft/sec) |
| Environments: | Air, steam, gas, refrigerants |
| Housing: | Stainless steel, Inconel, others |
| Bristles: | Haynes 25 |
| Diameter: | 19 mm (0.75") to 3050 mm (120") and higher |
| Configurations: | Solid ring, split ring, segmented, cartridge, linear strip |

LEAKAGE COMPARISON



Brush seals can reduce leakage by up to 80%.