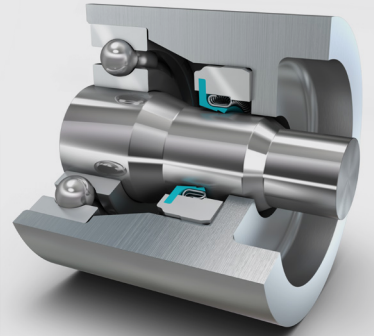


Rotary Sealing Solution for High Speed Medical Drills



Meeting the challenging needs of the healthcare and medical market

Trelleborg Sealing Solutions offers a new seal specifically engineered for high speed medical drill applications. Operating at rotational speeds up to 30,000 RPM, extensive testing has proved that the high speed rotary seal can significantly lessen heat generation during drilling, lowering operating temperatures. This, as well as minimal shaft wear and prevention of moisture ingress and contamination, extends service life of seals to lower overall cost of ownership.

Trelleborg Sealing Solutions develops, manufactures and supplies innovative engineered solutions for demanding healthcare and medical applications. From a single global source, backed by the expertise of our worldwide engineering and manufacturing network, Trelleborg Sealing Solutions has a commitment to supply a consistent quality product. We provide unrivalled product development support to optimize solutions for sealing challenges.

Applications

- Recommended for rotational speeds up to 30,000 RPM
- Surgical drilling, reaming and sculpting
- Dental drilling

Benefits

- Enhanced cleanliness due to reduced contamination
- Operational longevity
- Reduced operating temperatures
- Minimal seal and shaft wear
- Ability to increase product service warranty

HIGH SPEED ROTARY SEAL

Meeting Market Needs

The new high speed rotary Variseal® is an alternative to traditional Turcon® Variseal® designs for small diameter service. Using FEA technology, Trelleborg was able to develop a new Turcon® Variseal®, that would remain cooler, with minimal seal and shaft wear.

Test Conditions

Shaft Diameter: 0.187" / 4.76 mm

Shaft Speed: 24,000 rpm

Media: Saline

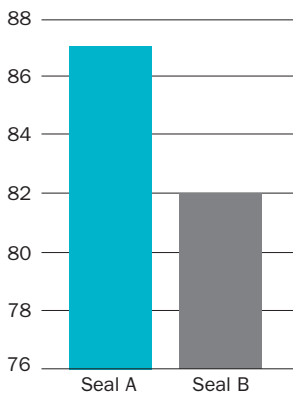
Test Cycle: 10 minutes at full speed, 2 minutes static for a total of 360 cycles

Test Results

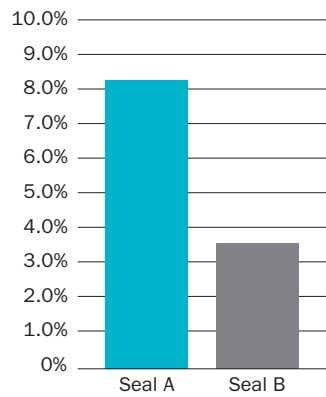
Both the traditional Turcon® Variseal® (seal A) and new Turcon® Variseal® (seal B) met the leakage requirement of zero drops and it was found that the new Trelleborg high speed rotary design showed improvement in all three target attributes.

- 1) A 33% reduction in heat generation in the area just outside the sealing area
- 2) Seal wear reduced by 58%
- 3) Shaft wear reduced by 61%

Temperature At Seal



Seal Wear



Shaft Wear (Inches)

