

CUSTOM MOLDED SEALS & WIPERS

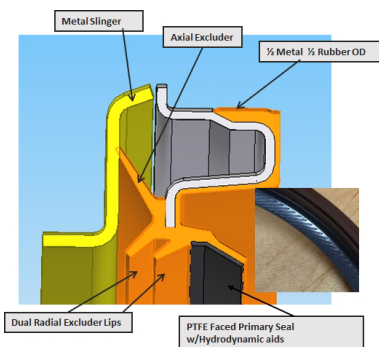
Low Drag Lip Seal

Dynamic radial lip seal geometry impacts torque and sealing performance.

Eccentricity and drag influence the performance and lifespan of sealing elements. Radial force, friction, and lip geometry are leading parameters in dynamic seal design that directly affect seal drag or torque to rotate. Lip seals for drivetrain output-shaft applications require suitable geometry to achieve the proper radial load (squeeze) contact with the shaft to prevent excessive buildup of frictional torque, resulting in elevated under-lip temperatures and higher energy consumption.

Low Drag Lip Seal

OEMs concerned with improving energy efficiency through low drag coefficients, seal rolling resistance, or break-away torque should look to sealing solutions that focus on low friction materials and reduced radial load. The results achieve lower torque loads to rotate the shaft within the seal.

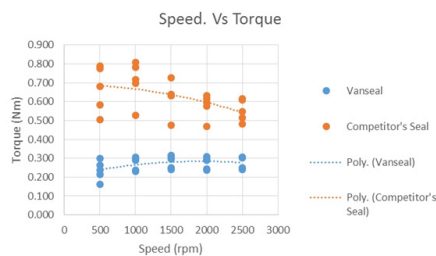


Vanseal Design

Our design has several key improvements which lower radial load and frictional torque.

1. Engineered low-radial load, PTFE-faced, elastomer primary lip.
2. Hydrodynamic aids used to seal in lubricants.
3. Dual-radial and single-axial excluder elements incorporated to seal out contaminants.

Vanseal's custom Low Drag Lip Seal has 60% less drag-torque than typical radial lip seals, performs in temperatures ranging between -40F and 300F (-40C – 150C), and handles maximum operating speeds up to 3,850 RPM (3,275 sfpm (16.5 m/s)).



Vanseal's Low Drag Lip Seal is proven, successfully completing 2,000 hours of dynamic hot oil bench testing with no leakage. Testing also verified seals exposed to over 1,850 hours of dynamic dust and 250 hours of mud slurry bench testing experienced no contaminant ingress.

Our Low Drag Lip Seal works well in pump or gearbox applications driven by low or fractional horsepower motors. Our seal design improves the performance of drivetrain assemblies where fuel consumption and parasitic energy loss are a concern as found in transmission input and output shafts, wheel ends, or pinion seals.

Trust your seals. Vanseal solves tough sealing problems. Our manufactured, highly-engineered rubber and PTFE solutions, use dynamic testing methods, ensuring the highest level of performance.

- Radial lip seals
- Hydraulic rubber seals
- Rapid prototyping
- Overmolding
- Assembly
- Tooling
- Seal testing



Founded 1956
Vandalia, Illinois

Vanseal is a premier designer and manufacturer of radial lip and hydraulic rubber seals and mechanical seal components.

We generally serve customers in the commercial, off-highway, agricultural, fluid power, recreational vehicle and aerospace industries.



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