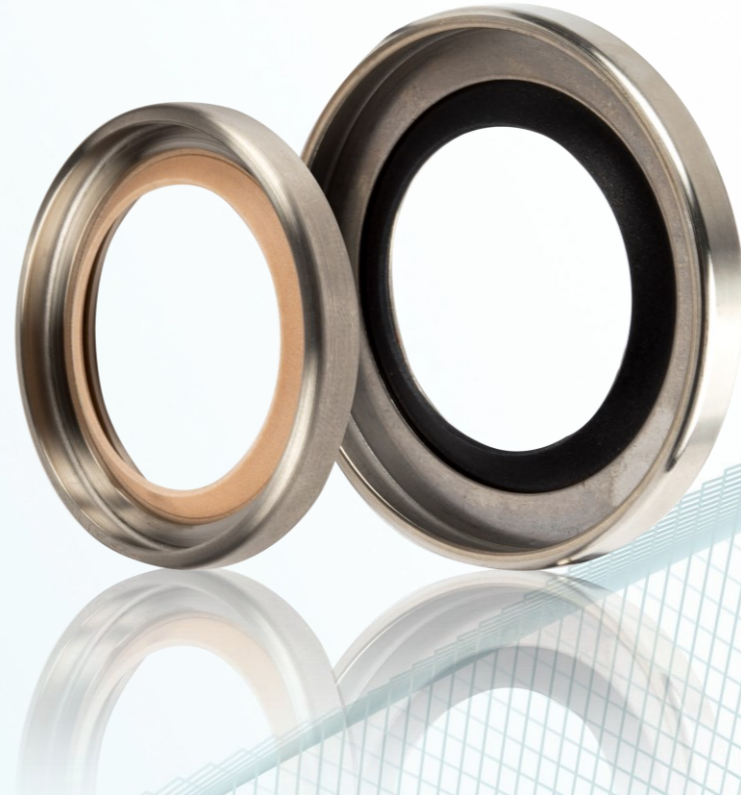


OMNILIP™ HIGH SPEED LIP SEAL

Our Solution For New Requirements Of Electric Drive Units



Challenge

New Requirements of Electric Drive Units



Much Higher Rotating Velocity



Lifetime bi-directional Sealing Requirements



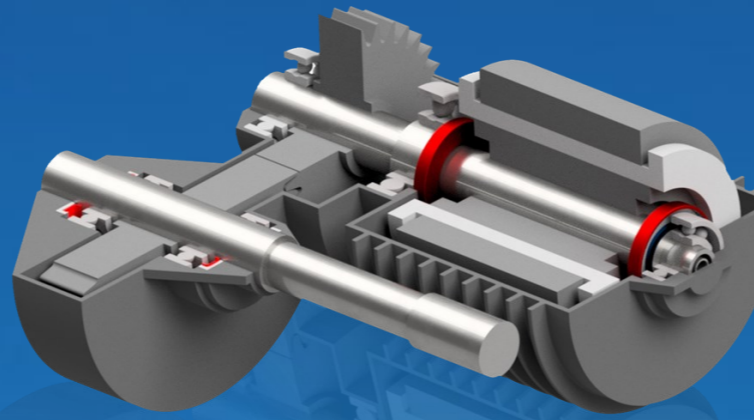
Low Viscosity Fluids with Aggressive Additives



Wide Temperature Range

Solution

Omnilip™
HIGH SPEED LIP SEAL



Reliability at High Speeds

Electric Drive Unit applications work at increasingly high rotational speeds of >30 m/s. Very high friction induced heat is created on top of the normal application temperatures. Due to excellent temperature resistance of Rulon® compounds, our OmniLip™ works reliably up to >100 m/s at temperatures from -40°C to 260°C which far exceed the application temperature of -40°C to +160°C of the Electric Drive Unit.

Excellent bi-directional Sealing

An optimal contact of the lip seal and the shaft surface at high speeds is ensured by the flexibility of the material and a design element leading to reliable sealing in forward and reverse direction with zero leakage in both motions. A special feature inside the metal housing compensates for thermal expansion and dynamic forces, preventing possible leakage paths.

Lifetime Durability

The material properties of Rulon® ensure a long lifetime performance with no aging or degradation. Chemical inertness allows the use in different formulations of oils, water and glycol, furthermore wear resistance leads to stable performance over lifetime of the Electric Drive Unit.

Results

Testing - Data Sheet

	1	2	3	4	5
DIRECTION OF ROTATION	→	←	→	→	COOL DOWN STAGE
OIL TEMPERATURE OF TEST	90°C +/- 5°C	90°C +/- 5°C	max allow. Temp.	max allow. Temp.	
INPUT RPM	max input RPM	30% of max input RPM	max input RPM	30% of max input RPM	0
TESTTIME PER CYCLE	13h	0.4h	5h	0.2h	0.2h
RESULT	✓	✓	✓	✓	