

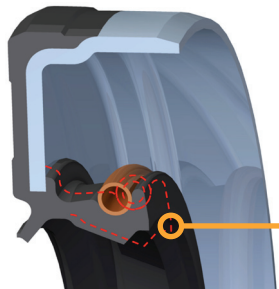
LOW FRICTION SIMMERRING® SHAFT SEALS



Standard Simmerring shaft seal



Low Friction Simmerring shaft seal (LFS)



Standard Simmerring shaft seal profile compared

Energy Saving Simmerring shaft seal (ESS)



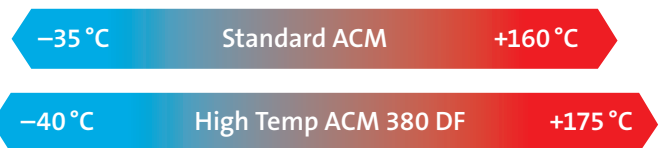
VALUES FOR THE CUSTOMER

- ACM 380 DF: better relaxation characteristics and bigger temperature range (-40°C to 175°C) compared to classic ACM
- Lower friction compared to conventional sealing lip profile: 15 to 20%
- Lower price compared to FKM seals due to special ACM for high temp
- Higher ability for high speed and high temp applications
- Less sensitivity during assembly compared to ESS

NEW HIGH TEMPERATURE ACM

Advantages of high temperature ACM 380 DF compound:

- Better relaxation characteristics and bigger temperature range (-40°C to $+175^{\circ}\text{C}$)
- Excellent compatibility with the additives of the new generation of oils for gearboxes and axles
- Inline with the current environmental protection requirements such as EU regulations and REACH





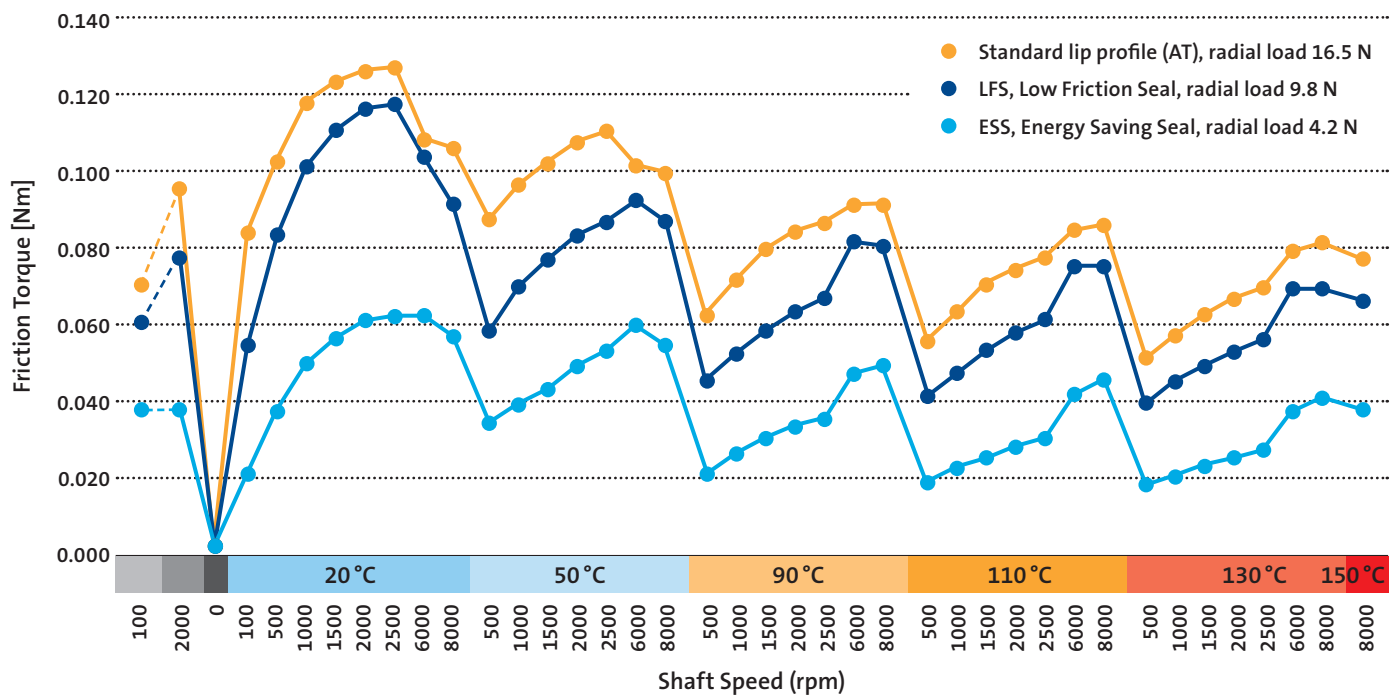
FEATURES AND BENEFITS

Comparative features of the LFS and ESS versus the standard Simmerring® shaft seal

	Standard Simmerring shaft seal	LFS, Low Friction Seal	ESS, Energy Saving Seal
Friction	good	very good	outperforming
High Speed/High Temp	good	very good	outperforming
Dirt	very good	very good	inferior
Assembly	outperforming	outperforming	outperforming in lip direction/ inferior against lip direction
Air Leakage (end of line test)	outperforming	outperforming	inferior*

*Only for input seal with specified assembly line

The Low Friction Simmerring shaft seal demonstrates 15-20% lower friction in comparison to the conventional sealing lip (AT vs LFS)



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