

Prevent premature main shaft bearing failure with SKF industrial seals

European wind turbines – Main shaft bearings and seals

Why risk unplanned downtime and high crane costs with a sub-par seal? Trust your uptime and your bottom line to the robust reliability of SKF industrial seals.

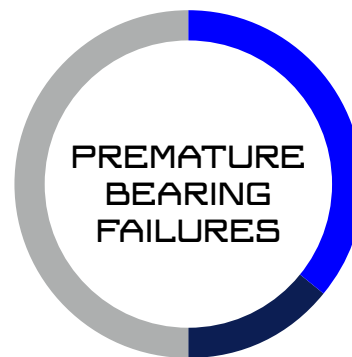
As a leading bearing and seals manufacturer, SKF has a unique perspective on the interplay of the elements in rotating equipment. Thanks to our advanced sealing technologies, designs and development processes, our seals outperform the competition on the test bench and in the application.

Wind turbines operating in harsh and remote environments require adequate sealing for each bearing to work optimally. SKF industrial seals are designed to provide maximum protection against contaminants while containing the lubricant.

The seals work with both grease and oil lubricants and can operate in a wide temperature range.

Seal related failures

- 36% poor lubrication
- 14% contamination



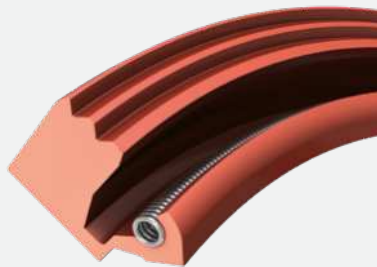
**Customer validated:
Seals replaced in
2 turbines in as little
as 1 DAY**

Easy scheduled installation maintenance can save:

- Lost production
- Additional wages
- Cost on installation tools

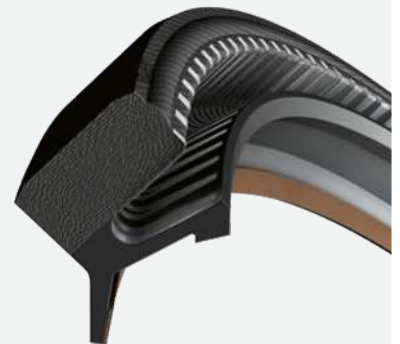
Machined seals

- Application-specific designs
- No tooling required
- No minimum order quantity
- Immediate availability
- Material performance
- Easy installation
- Problem solver for leakage and wear



Moulded seals

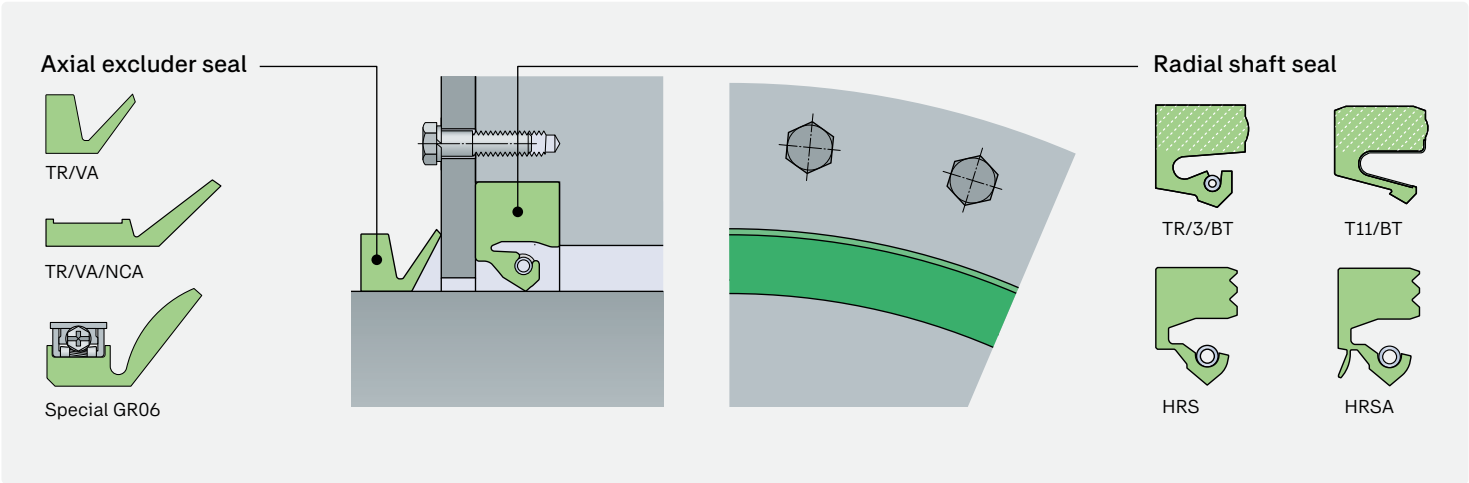
- Standard, special, and customized designs
- Availability PTFE vulcanized on lips, to reduce 80% friction
- Garter spring, as well finger springs
- Oil and grease lubrication
- Lower cost level





Increase up-tower reliability and shorten workshop repairs with customized sealing solutions

SKF offers a completely customizable solution for the main shaft bearing to keep lubricants in place and exclude harsh environmental contaminants.



Wind turbine model	Main shaft bearing type	Seal design	
		Machined seal	Moulded seal
Vestas V90, Siemens Gamesa G9X 2.0MW	Spherical roller bearing	HRS	TR/3/BT
	Spherical roller bearing	HRSA	TR/3/P/BT
Vestas V52, Siemens Gamesa G5X	Spherical roller bearing	HRS	TR/3/BT
Vestas V47, Siemens Gamesa G47	Spherical roller bearing	HRS	TR/3/BT
Siemens SWT 2.3 101-120	Spherical roller bearing	HRS	TR/3/BT
General Electric GE 1.5sl	Spherical roller bearing	Special GR06	TR/VA/NCA
Enercon E70 - E92	Cylindrical roller bearing	–	T11/BT, TR/VA
	Tapered roller bearing	–	T11/ML, TR/VA
Senvion 5/6 M	Spherical roller bearing, CARB bearing	Special GR06	–
Senvion MM 92	Spherical roller bearing	Special GR06	–
Senvion MM82	Spherical roller bearing	Special GR06	TR/VA
NEGM 82 (NM 82/1500; NM 82/1650)	Spherical roller bearing	Special GR06	TR/VA
NEGM 92	Spherical roller bearing	Special GR06	TR/VA

For up-tower replacement we offer split seal executions for easy installation.

Scan the QR codes for
step-by-step help.



Installation instructions
(animation) of SKF seals
for wind turbines



Installation video
of HRS split seals
from SKF

skf.com

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