

OEM SPECIFICATIONS AND APPROVALS

	Preslia	Preslia	Preslia	Preslia	Preslia	Biopreslia	Azolla	Hydransafe
	GT	Evo	SE JET	SE HTS	HT	HT	AF	FR EHC

TURBINE OIL

Meets the requirements:

▶ ANDRITZ Hydro	✓							✓
▶ GE GEK 27070, 46506, 28143, 101941, 32568, 107395	✓	✓	✓					
▶ GE LM series				✓	✓			
▶ SIEMENS Industrial Turbo. AB MAT 812101 /02 /06/ 07 /08 /09	✓	✓	✓					
▶ SIEMENS Turbomachinery 1CW0047915	✓	✓	✓					
▶ SOLAR ES 9-224, Class II	✓	✓	✓					
▶ VOITH Hydro	✓							✓

Approved for:

▶ ALSTOM HTGD 90117	✓	✓						
▶ ALSTOM HTWT 600050	✓							
▶ ANSALDO TGO2-0171	✓	✓	✓					
▶ BAKER HUGHES ITN0000033		✓			✓			
▶ DOOSAN SKODA, Turbiny Plzen	✓	✓						
▶ FUJI ELECTRIC steam turbines	✓							
▶ HTC HANGZHOU steam turbines	✓							
▶ MAN ES TED 1000494596				✓				
▶ NANJING Turbines (NTC)		✓						
▶ SHANGHAI ELECTRIC	✓	✓						
▶ SHIN NIPPON	✓	✓						
▶ SIEMENS TLV 901304, 901305	✓	✓	✓					
▶ SIEMENS SGT-A05 (501-K), SGT-A35 (RB 211), SGT-A20 (AVON)					✓		✓	
▶ TOSHIBA steam turbines	✓							
▶ TRIVENI steam turbines	✓							

HYDRAULIC FLUID

Meets the requirements:

▶ ISO 15380 (HEES fluids)						✓		
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Approved for:

▶ ALSTOM HTGD 690149								✓
▶ FUJI ELECTRIC							✓	✓
▶ GE GEK 120319								✓
▶ MHPS MS04-MA-CL004								✓
▶ SIEMENS zinc-free mineral hydraulic oils						✓		
▶ SIEMENS TLV 901203								✓

A major player

With our production, supply chain and commercial presence in more than 160 countries, we deliver a full range of lubricants.

Support and partnership

Thanks to local technical presence, we provide a high level of service to optimize your Total Cost of Ownership.

References & OEMs

TotalEnergies Lubrificants cooperates with equipment manufacturers to create high-technology products for optimal performance and production of your machinery.



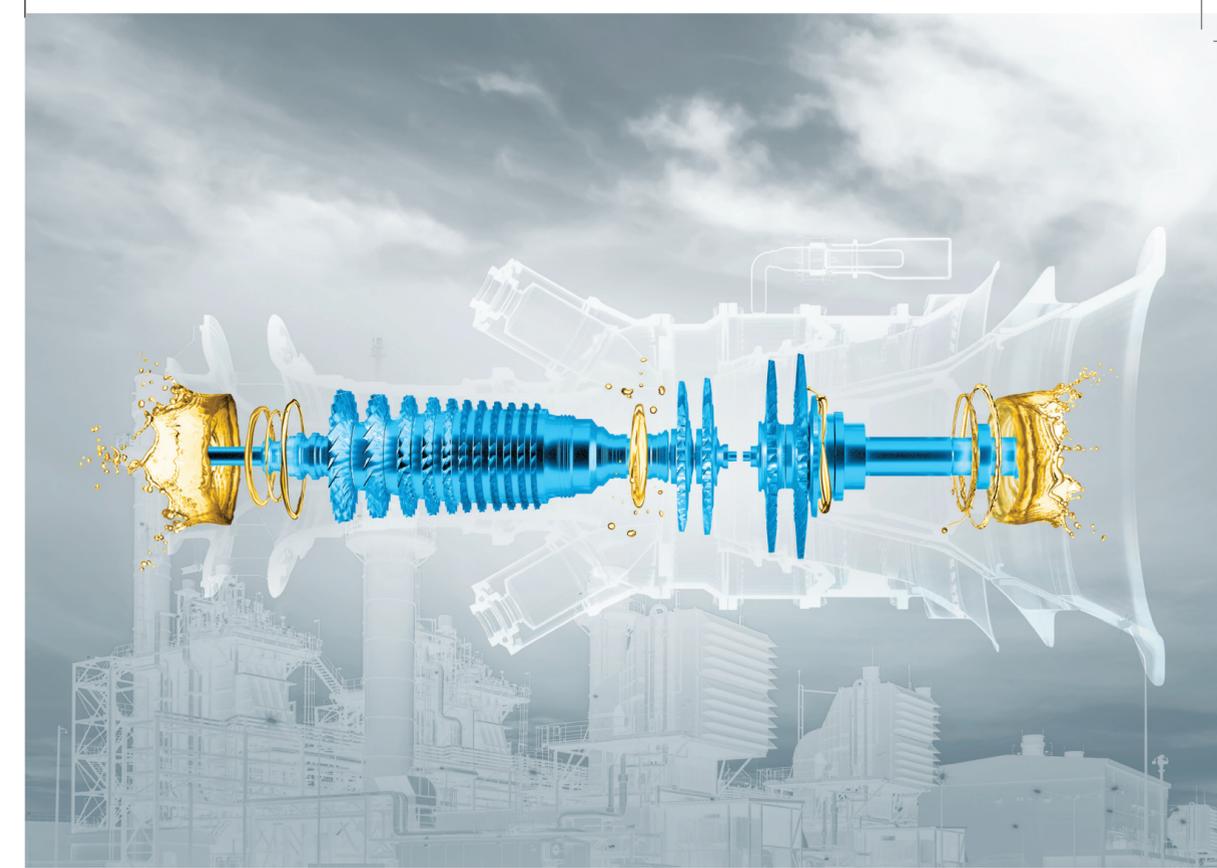
5 good reasons for choosing TotalEnergies Lubrificants

Innovation & Research

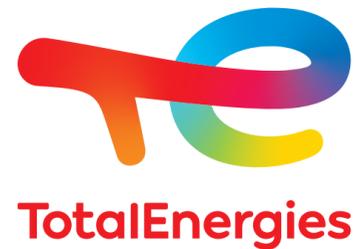
TotalEnergies Lubrificants invests in biotechnologies to find the most suitable components to reach energy efficiency through formulations designed in our Research Centers.

Quality and environment

TotalEnergies Lubrificants ISO 9001 and 14001 certifications are the guarantee of a long term commitment to quality and environment. From the initial design stage, our R&D teams seek to develop products that minimize toxicity risks and environmental impact.



Preslia
Turbine oil for efficiency & reliability
Ensuring your turbine's optimal performance

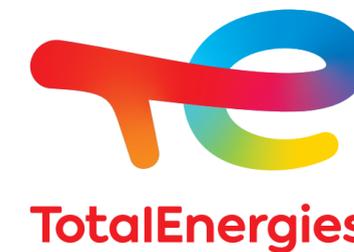


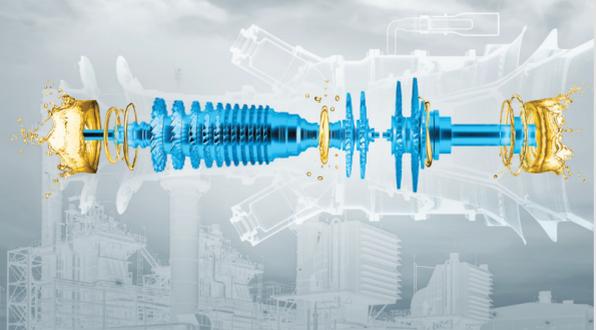
totalenergies.id



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Local presence

You can rely on **expert support** from our 130 affiliates and local supply chains to carry out your project wherever it is.

We give you direct **access to our value-added services for turbines**, including oil monitoring and implementation of our onsite turbine filling package.

Reliable performance

Our formulations are optimally balanced to **minimize** deposits, **protect** your turbine under the most demanding conditions and keep your operations **trouble-free**.

The long operating life of our turbine oils will help you **maximize uptime and reduce your overall operating costs**.

Wide expertise

We have **broad experience across many sectors**: fossil-fuel, nuclear, hydro, biomass, geothermal and concentrated solar power plants.

You are assured of **manufacturer-approved products** that have a proven track record in the field, from power companies to industrial processing plants.



TURBINE OIL PERFORMANCE

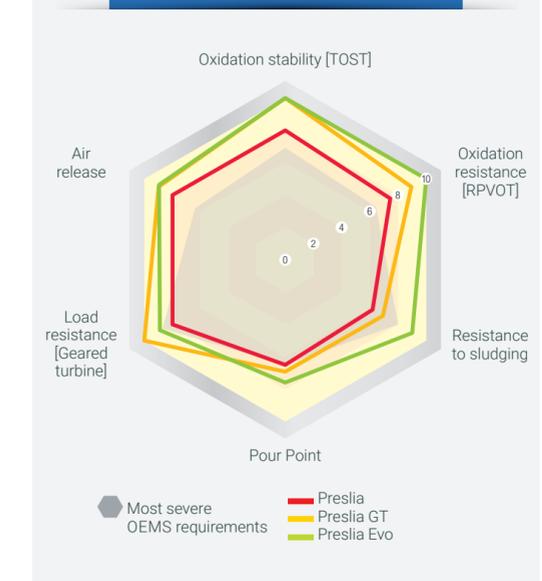
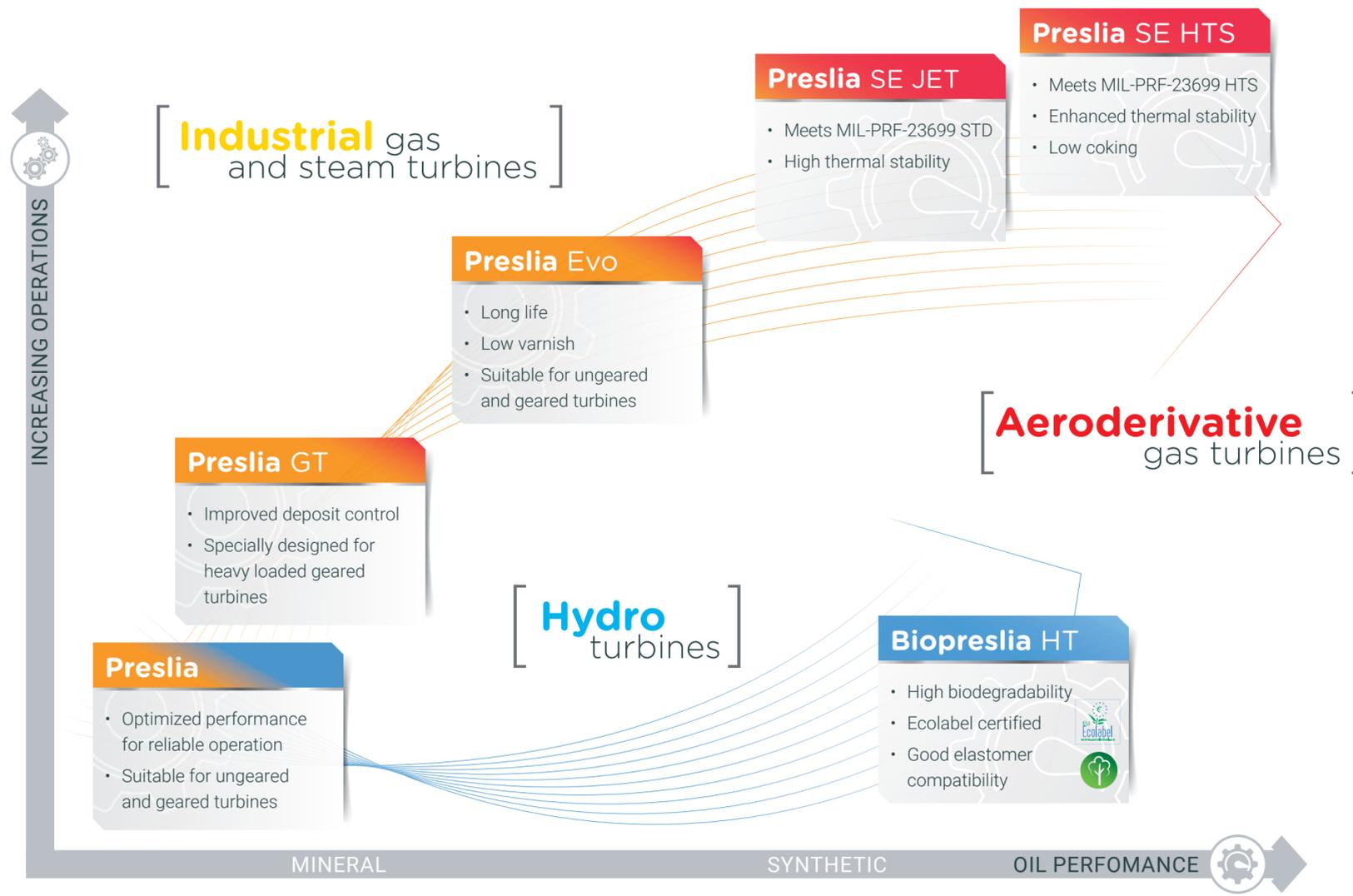
SERVICES TAILORED TO YOUR NEEDS

Turbines are essential to the energy transition.

More than ever, **reliability and uptime** matter when it comes to supporting dispatchable and **low-carbon power generation**.

At TotalEnergies Lubrificants, we understand the need for operation-specific solutions. With the benefit of our extensive experience with original equipment manufacturers, **we offer you a complete range of lubricants and services for all turbomachines**: hydro, steam, gas, combined-cycle turbines and turbo compressors.

Ramp up to full capacity with Preslia turbine oils!



Oil condition monitoring

LubAnac is an in-service oil monitoring solution to help you optimize drain intervals and extend the service life of your equipment.

For turbines, TotalEnergies Lubrificants has developed **LubAnac Turbine**, a package to monitor the parameters that are critical for their operation:

- **LubAnac Water Content (Karl Fischer Method) from 10 ppm** to detect accidental water pollution, ideal for hydro, steam, or gas turbines operating in a humid environment.
- **Air release and foaming** to prevent wear and control malfunctions caused by the presence of air bubbles in the oil, regardless of turbine type.
- **Presence of oxidation and varnish precursors (Membrane Patch Colorimetry method)** to avoid lacquering of critical components and coolers in both steam and gas turbines.

Oil system maintenance

Our teams can **assist you anytime** to keep your lube oil system in good conditions. It includes:

- Flushing and first fill operations
- Oil tank cleaning
- Oil filtration
- Water removal from oil
- Prevention of varnish build-up
- Waste oil management

EHC FLUIDS FOR STEAM TURBINES

- Hydransafe FR EHC**
 - Phosphate ester hydraulic fluid
 - Superior fire resistance
 - Improved health and safety performance
- Flushoil FR EHC**
 - Phosphate ester flushing fluid
 - Improved system cleanliness
 - Easy maintenance
- Azolla AF**
 - Ashless mineral hydraulic oil
 - Applications without fire risk



Preslia