

s and approvals

TURBINE OIL	Preslia	Preslia	Preslia	Preslia	Preslia	Biopreslia	Azolla	Hydransafe
	GT	Evo	SE JET	SE HTS	HT	AF	FR EHC	
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 TCW0047915	✓	✓	✓					
▶ 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)								✓
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.



TotalEnergies



totalenergies.id

PT TotalEnergies Marketing Indonesia
South Quarter, Tower B, 15th fl.
Jl. RA Kartini Kav. 8
Jakarta - 12430 -- INDONESIA
T. : +62 21 50989333



TotalEnergies Industry Solutions



TotalEnergies

Natural gas value chain

TCO* enhanced lubricants

Optimizing your efficiency from Gas Wells to Gas compressors

OEM

specifications

GAS ENGINE	Nateria MH	Nateria MP	Nateria MJ	Nateria MWX	Nateria MX	COOLANT
▶ JENBACHER	Type 2 & 3	✓ (gas A, B, C, CAT)	✓ (gas A, CAT)	✓ (gas B, C)	✓ (gas A)	✓ (gas A)
	Type 4 A, B	✓ (gas A, B, C, CAT)	✓ (gas A, CAT)		✓ (gas A)	✓ (gas A)
	Type 4 C, E				✓ (gas A)	✓ (gas A)
	Type 6 C, E	✓ (gas A, B, C, CAT)	✓ (gas A, CAT)		✓ (gas A)	✓ (gas A)
	Type 6 F, J				✓ (gas A)	✓ (gas A)
	Type 6 H, K					✓ (gas A)
▶ WAUKESHA	VGF, VHP, 275GL/GL+, APG series	✓	✓		✓	
	Cogeneration		✓			
▶ CATERPILLAR ENERGY SOLUTIONS	CAT CG132/170/260	✓	✓	✓		✓
	CG132B/170B					✓
	3300, 3400, 3500 series				✓	✓
▶ MWM	TCG 2016/2020/2032	✓	✓	✓		✓
	TCG 3016/3020					✓
▶ Wärtsilä	34SG, 50SG				In progress	✓
	4000 series L32/33	✓	✓			
	4000 series L61/62/63	✓	✓			
	4000 series L64		✓			
▶ MTU	4000 series L32FB					
	4000 series L62FB			✓		
	400BR series	✓	✓	✓		
▶ BERGEN ENGINES	K-G1, -G2 and -G3 C26:33 B35:40		✓			
	B36:45				✓	In progress
▶ MAN Energy Solutions	35/44, 51/60		✓ (SAE 40, 50)			✓
▶ MAN Truck & Bus	M3271-2	✓	✓			
	M3271-4			✓		
▶ CUMMINS	QSK60, QSV91					In progress
	HSK78					In progress
▶ DEUTZ	0199-99-01213/1 (all engines)	✓	✓			
▶ TEDOM	Centio		✓	✓		In progress
▶ KHI KAWASAKI	KG series					In progress
▶ MHIET	GS-R series		✓			In progress

Natural gas Industry

Your challenges

- Reduce downtime
- Optimize the lube oil life
- Operate at high and low pressures
- Reduce overhead and consumables cost

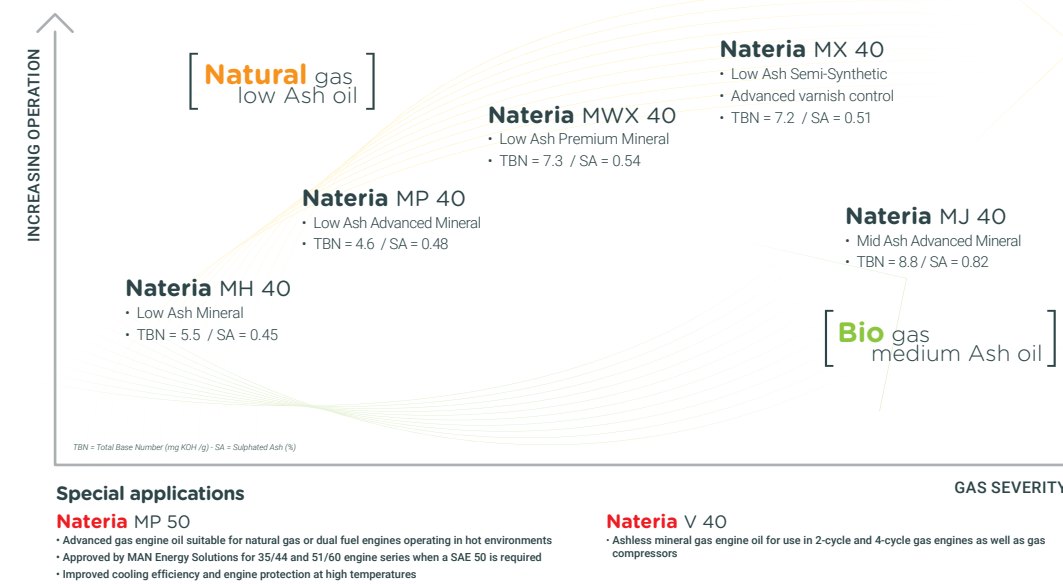
Our solutions

With our carefully selected base oils and additives meeting leading **equipment manufacturers' requirements**, we keep your equipment reliable in any conditions by providing:

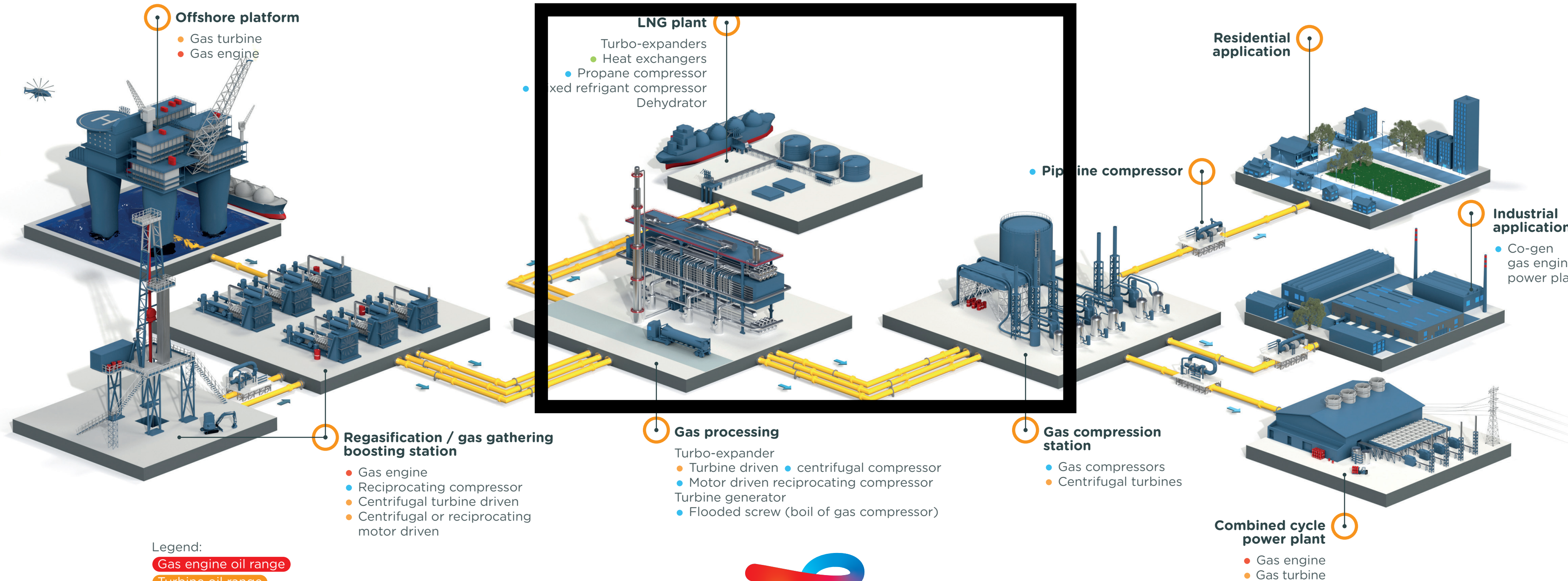
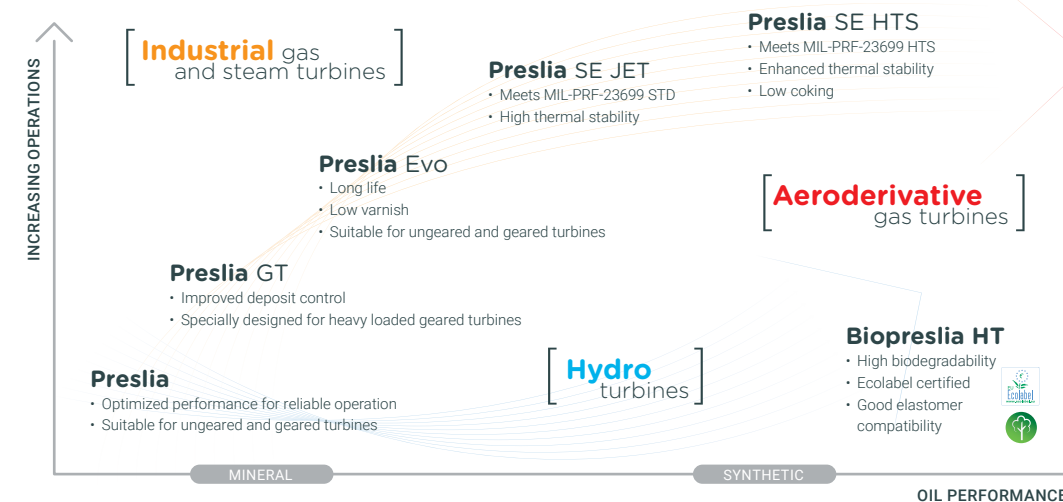
- OEM approved and qualified products
- Optimize total cost of ownership (TCO)
- Higher reliability
- Optimized mean time between failures

Simplified version of natural gas value chain

Gas engine oil range



Turbine oil range



Gas compressor oil range

Select based on PSIG and gas stream

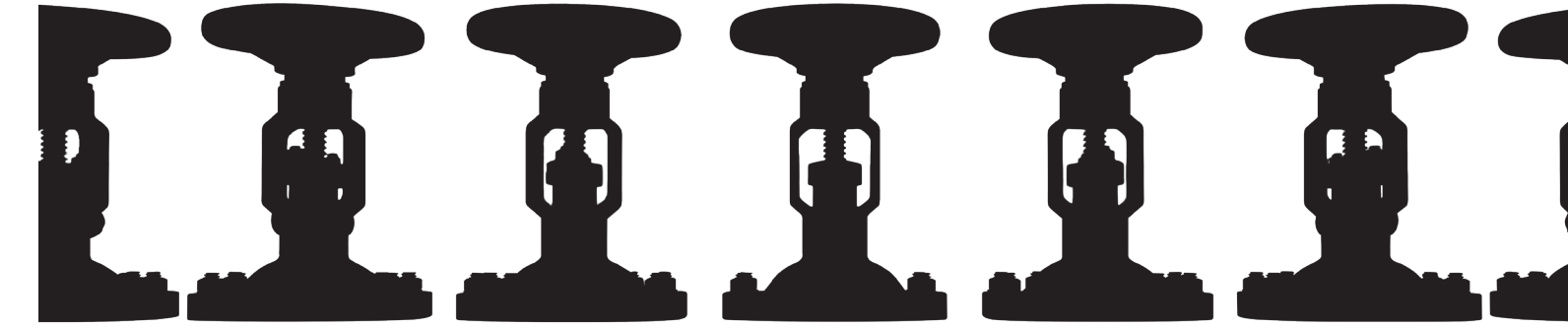
GAS STREAM	< 1000	1000 to 2000	2000 to 3500	3500 to 5000	> 5000
Pipeline quality including CNG (Dry)	Cortis MS 150 (NC) Dacnis LPG 150	Cortis MS 150-220 (NC) Dacnis LPG 150	Cortis MS 220 (NC) Dacnis LPG 220	Cyl C 320-460 (C) Dacnis LPG 220	Cyl C 460-680 (C)
Natural gas, water saturated and/or heavy hydrocarbons where SG > 0.7	Cortis MS 150-220 (NC) Dacnis LPG 150	Cortis MS 220-320 (NC) Dacnis P 220 CD (C) Dacnis LPG 150	Cyl C 460-680 (C) Dacnis LPG 220	Cyl C 680 (C)	
Natural gas, water saturated and carbon dioxide > 2 to 10 %	Cortis MS 150-220 (NC) Dacnis LPG 150	Cortis MS 220-320 (NC) Dacnis P 220 CD (C) Dacnis LPG 150	Cyl C 460-680 (C) Dacnis LPG 220	Cyl C 680 (C)	
Natural gas, water saturated and carbon dioxide > 10 %	Cortis MS 150-220 (NC) Dacnis LPG 150	Cortis MS 220-320 (NC) Dacnis P 220 CD (C) Dacnis LPG 150	Cyl C 460-680 (C) Dacnis LPG 220	Cyl C 680 (C)	
Natural Gas, water saturated and H2S > 2 % to 30 %	Cortis MS 150 (NC) Dacnis LPG 150	Cortis MS 150-220 (NC) Dacnis LPG 150	Cortis MS 220 (NC) Dacnis LPG 220	Cortis MS 320 (NC) Dacnis LPG 220	Cyl C 460-680 (C)
Natural Gas, water saturated and H2S > 30 %	Cortis MS 150 (NC) Dacnis LPG 150	Cortis MS 150-220 (NC) Dacnis LPG 150	Cortis MS 220 (NC) Dacnis LPG 220	Cortis MS 320 (NC) Dacnis LPG 220	Cyl C 460-680 (C)
Air or gas mixtures with > 4 % oxygen content	Diester or POE ISO 100 Dacnis LPG 150	Diester or POE ISO 150 Dacnis LPG 150	Consult TotalEnergies	Consult TotalEnergies	Consult TotalEnergies
Nitrogen	Cortis MS 150 (NC) Dacnis LPG 150 (P)	Cortis MS 150-220 (NC) Dacnis LPG 150	Cortis MS 220 (NC) Dacnis LPG 150	Cortis MS 320 (NC) Dacnis LPG 150	Cyl C 460-680 (C) Dacnis LPG 220
Propane (refrigerant)	Cortis MS 150 (NC) Dacnis LPG 150	Cortis MS 150 (NC) Dacnis LPG 150	Consult TotalEnergies	Consult TotalEnergies	Consult TotalEnergies

* C : Compounded / NC: Non-compounded

Heat transfer fluid

PRODUCT	OPERATING TEMPERATURE	VISCOSITY
Seriola AB	Process temperature -30 to +300 °C (+320 °C in the film)	Viscosity at 40 deg - 20 mm2/s
Seriola 32, 100	Process temperature 0 to +310 °C (+330 °C in the film)	Viscosity at 40 deg - 32, 100 mm2/s
Seriola ECO2	Process temperature 0 to +300 °C (+320 °C in the film)	Viscosity at 40 deg - 34 mm2/s

* For refrigeration compressor – please consult TotalEnergies



Natural gas
value chain