



# Natural gas value chain

TCO\* enhanced  
lubricants

Optimizing your efficiency  
from Gas Wells to Gas  
compressors



**TotalEnergies**

# Summary

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- OEM specifications & approvals
- Natural gas industry
- Gas engine oil range
- Turbine oil range
- Gas compressor oil range
- Heat transfer fluid
- Five good reasons for choosing TotalEnergies Lubrificants





# Natural gas Industry

## Your challenges

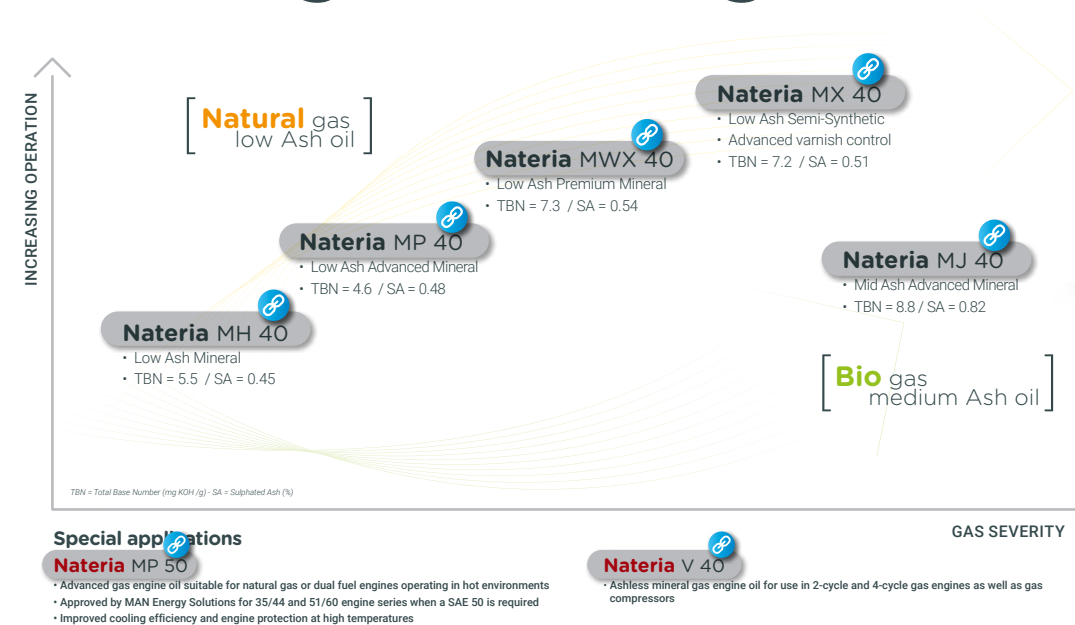
- Reduce downtime
- Optimize the lube oil life
- Operate at high and low pressures
- Reduce overhead and consumables cost

## Our solutions

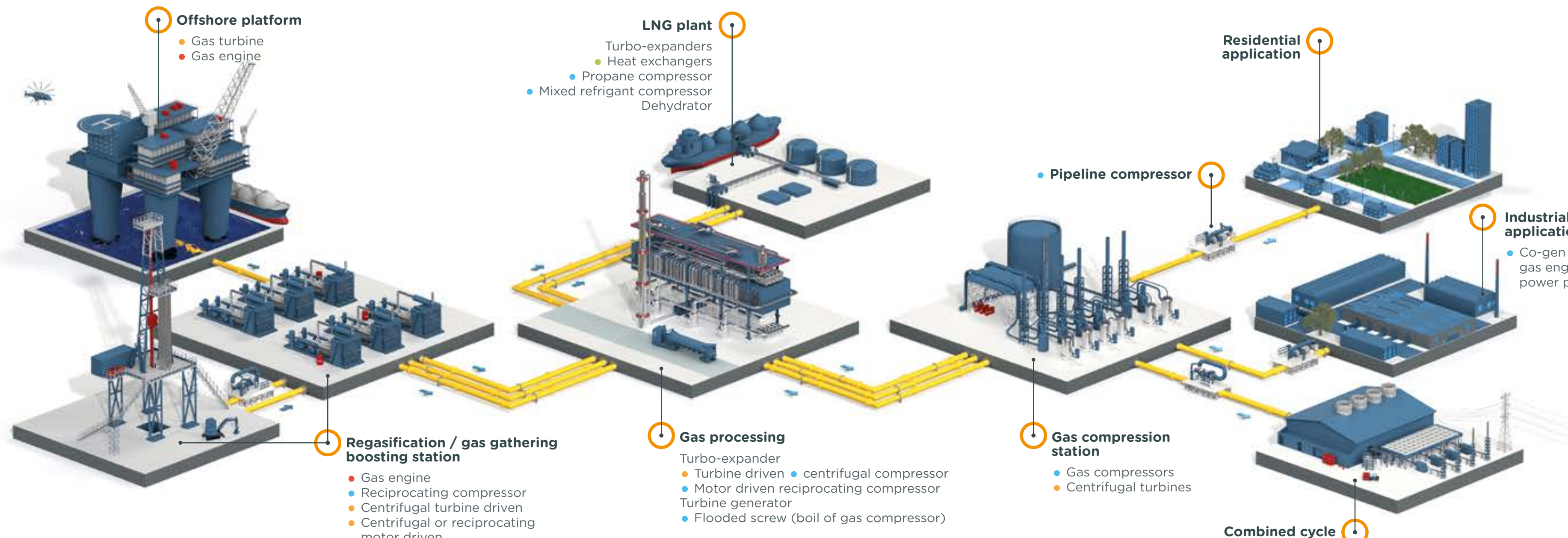
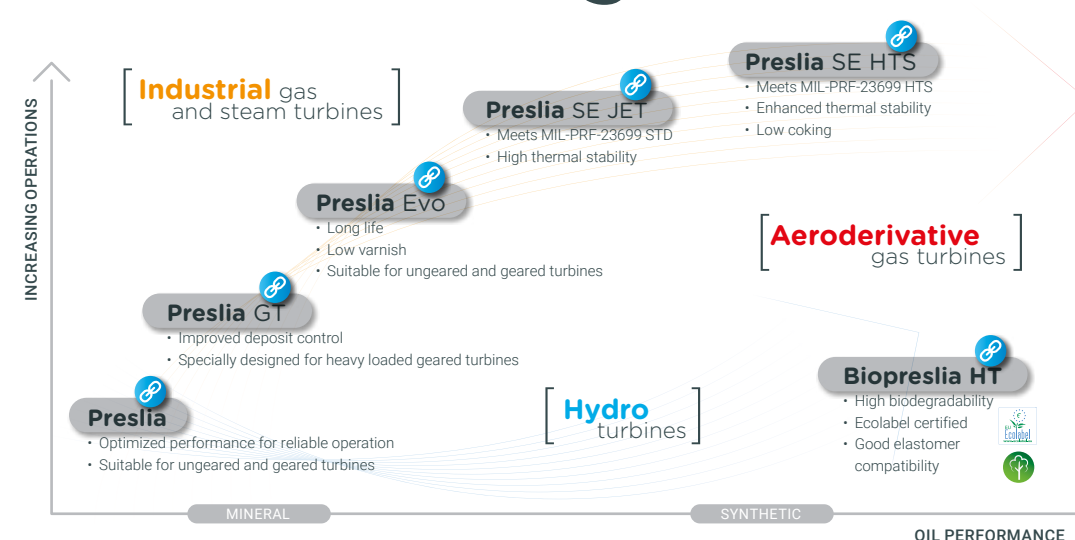
- With our carefully selected base oils and additives meeting leading **equipment manufacturers' requirements**, we keep your equipment reliable in any conditions by providing:
- OEM approved and qualified products
  - Optimize total cost of ownership (TCO)
  - Higher reliability
  - Optimized mean time between failures

## Simplified version of natural gas value chain

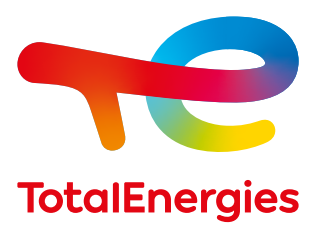
### Gas engine oil range



### Turbine oil range



- Legend:
- Gas engine oil range
  - Turbine oil range
  - Gas compressor oil range
  - Heat transfer fluid



### 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) Danis 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) Danis 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 (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 > 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 mm <sup>2</sup> /s
Seriola 32, 100	Process temperature 0 to +310 °C (+330 °C in the film)	Viscosity at 40 deg - 32, 100 mm <sup>2</sup> /s
Seriola ECO2	Process temperature 0 to +300 °C (+320 °C in the film)	Viscosity at 40 deg - 34 mm <sup>2</sup> /s

\* For refrigeration compressor - please consult TotalEnergies





### 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.



### 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



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Safety Data Sheets are available at [ms-sds.totalenergies.com](https://ms-sds.totalenergies.com)



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