

# Thermal systems manufacturing

Lubricants & fluids  
for all your operations

Our expertise, your success  
towards **future mobility**



**TotalEnergies**

# Summary

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- Oil & grease product range & services
- Your challenges, our solutions
- Oils for: air conditioning, cutting and stamping products
- Five good reasons for choosing TotalEnergies Lubrificants

**Planetelf**  
PAG K

**Coolelf**  
SUPRA

**Folia**  
B 7000 D

**Martol**  
LVG 25 AQ

**LubAnac**

**LubInsight**  
maintenance planner



## OILS

HYDRAULIC  
OILS

### Azolla range

Mineral fluids with good oxidation stability ensuring **anti-corrosion and anti-wear protection** of the equipment used in hydraulic systems under various operation conditions.

GEAR  
OILS

### Carter range

Oils designed for the lubrication of gears operating under various conditions. It offers **longer drain intervals**, superior protection of equipment and **reinforced resistance against corrosion and wear**.



## GREASES

LITHIUM  
GREASES

### Multis range

High performing multipurpose grease based on Lithium/Calcium thickener for automotive and industrial applications, **allowing longer service-life of equipment and ease maintenance operations** while rationalizing stocks.

CALCIUM  
SULFONATE  
COMPLEX  
GREASES

### Ceran range

High technology grease suitable for heavy loaded application over a wide range of temperature. Based on Calcium Sulfonate Complex thickener, it allows **outstanding resistance to water, wear, load and mechanical stability**.

## LubAnac Indus customizes the monitoring of your gearbox

Full range of lube oil analysis to allow you to anticipate and diagnose anomalies in the equipment. Thanks to LubAnac Indus, you:



**Reduce** your operating costs.



**Anticipate and plan** maintenance operations to perform them at the best time.



**Optimize** drain intervals and **extend the lifetime** of your equipment.



**Improve the reliability and performance** of your equipment.

## LubInsight maintenance planner optimizes your oil change strategy

Built on the expertise of our engineers, LubInsight maintenance planner offers you to:



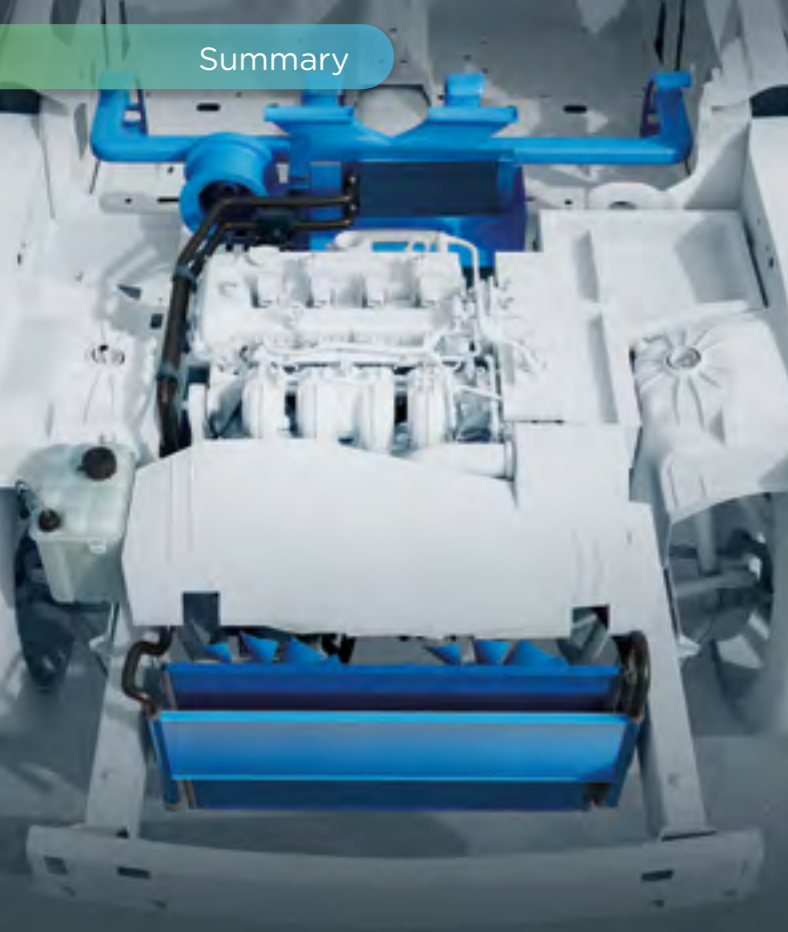
**Increase efficiency** and savings of your maintenance management.



**Monitor lubricant parameters and analysis** with a single tool.



**Assert your quality and safety management** through management of lubricant documentation and critical points.



# Thermal systems manufacturing

For more than 20 years, TotalEnergies Lubrificants has been supporting thermal system manufacturers, developing innovative and clean solutions.

Our portfolio includes fluids for metal and plastic parts manufacturing, as well as in-service fluids.

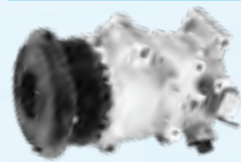
## Your challenges

- Maximise the level of **productivity** with little down time.
- Reduce failure risks to maximize **quality** of output.
- Maximize the **lifetime of equipment**.
- Reduce **Total Cost of Ownership (TCO)**

## Our solutions

- Outstanding quality products allow **longer drain intervals**.
- High performance lubrication solutions maximizing the **lifetime of your equipment**.
- **OEMs approved** products.
- **Last technology lubricants** enabling considerable savings.

### COMPRESSOR



High performance lubricants for compressor manufacturing & lubricating.

- Planetelf** PAG K High performance synthetic lubricant designed for vehicle air conditioning systems using HFO-1234yf and HFC-134a refrigerants.
- Valona** MS Neat cutting oil.
- Valona** GR Neat grinding oil.
- Spirit** Water based fluid for general machining.
- Folia** B 7000 D Biosourced water based fluid for general machining.



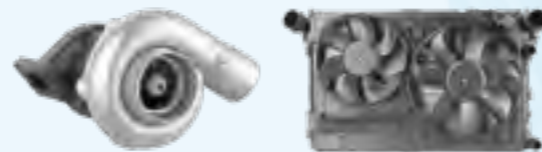
### HVAC MODULE



High quality hydraulic oils for plastic injection.

- Equivis** HE High-efficiency hydraulic lubricant that meets the demand for energy efficiency and durability. Extension of drain intervals due to an excellent thermal stability and resistance to oxidation.
- Azolla** ZS Reinforced protection of equipment. Good thermal stability and oxidation resistance. Considerable service life for fluids, preventing the build-up deposits.
- Azolla** ECO2 Regenerated oil complying with ISO HM 46 standard contributing to reduce the environmental footprint of lubricants.
- LUBRILOG** PE 1657 Silicone-free grease for HVAC flaps and mechanisms.

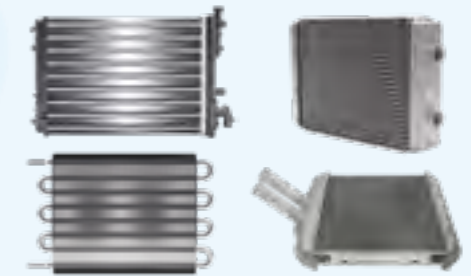
### COOLING FLUIDS



Premium quality coolants based on the latest organic technology.

- Coolelf & Glacelf** ranges
  - Excellent heat transfer for the engine cooling.
  - Reinforced freezing and boiling protection.
  - Very high protection of the cylinders at high temperature.
  - Excellent protection of the engine materials against corrosion and cavitation.
  - Exceptional service-life of the coolant.

### HEAT EXCHANGER



Specific stamping oil range for mechanical and brazed heat exchanger.

- Martol** LVG 25 AQ VOC free stamping oil, thermally degreasable.
- Martol** EV 10 CF Fast evaporating vanishing oil for easy stamping operation.





## AIR CONDITIONING

### Planetelf PAG K



High performance synthetic lubricant designed for vehicle air conditioning systems.



#### BENEFITS

- > Miscible with refrigerants HFO-1234yf and R-134a
- > Compatible with internal compressor materials made of elastomers
- > Strong protection against wear
- > Very stable against oxydation
- > Good thermal stability

**Compliant with decreased Ozone Depletion Potential (ODP) and Global Warming Potential (GWP) regulations.**

**Planetelf** PAG K is a fully synthetic range that provides superior protection to the compressors and reduces wear. Planetelf PAG K range brings ultimate lubricity to moving parts.

## CUTTING PRODUCT

### Folia B 7000 D



**Folia B 7000 D** is a biosourced solution free of mineral oils and emulsifiers, with high cooling and lubricating properties.



#### BENEFITS

- > Longer bath lifetime
- > Extended tool and fluid life
- > Increased productivity
- > No more foaming issues
- > Cleaner machines & workshops
- > Less fluid drag out (drier chips)
- > Reduce Total Cost of Ownership

Using advanced technologies, we bring to the market the first and only metalworking fluid, that replaces standard oils with biosourced polymers, providing the best performance for the operators and their environment:

- Longer tool lifetime and fluid timespan
- Less consumption
- Increased productivity
- Less hazardous components

## STAMPING PRODUCT

### Martol LVG 25 AQ



The **Martol** range is designed for stamping operations on ferrous and non-ferrous metals.



#### BENEFITS

- > Reduced VOC
- > High flash point (> 111 °C)
- > Thermally degreasable
- > Excellent stamping performances

In order to protect the health of users and protect the environment, the formulas are chlorine-free. It guarantees a very high level of lubrication and gains in productivity:

- Very good surface finish of stamped parts
- Reduction of maintenance shutdowns
- Good anti-corrosion properties
- Easy to remove



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



**Innovation & Research**

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

**Quality and environment**

TotalEnergies Lubrifiants 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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