



ReformTech

THE WORLD'S CLEANEST AUXILIARY HEATER!

ABOUT THE COMPANY

ReformTech is a CleanTech company that delivers cutting edge heating solutions for a better environment and a sustainable future.

ReformTech develops, manufactures and sells the world's cleanest heaters, based on a unique technology platform of clean and catalytic fuel processing, with superior heating performance, reduced power vs. weight/size ratio as well as reduced emissions.

ReformTech's customers are mainly global vehicle OEM's and large system integrators. The heaters are also suitable for retrofit, recreational vehicle and aftermarket customers.

PRODUCT OFFERING

ReformTech provides heaters for a diversity of applications. Choose between state of the art fuel fired heaters, catalytic heaters and electrical heaters.

Based on a unique technology platform of clean and catalytic fuel processing ReformTech develops clean and catalytic heater products. ReformTech's technology enables superior heating performance together with reduced emissions through new reactor design and catalytic combustion.

These low emission fuel operated heaters makes it possible to greatly improve the performance of diesel and gasoline powered heaters, which is getting more important as engines get more efficient and produce less excess heat.

For the next generation of hybrid and electrical vehicles ReformTech's novel heater technology helps enable a wide market acceptance by significantly prolonging the electrical range in cold weather while maintaining the green footprint (i.e. all scarce battery power can be used for propulsion and is not "wasted" on heating).

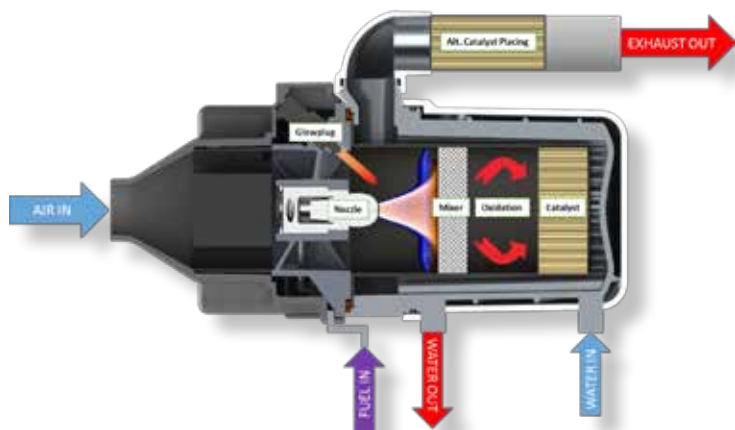


ABOUT THE TECHNOLOGY

ReformTech strives to improve our customers' solutions by implementing technologies that increase their total performance without ever compromising neither the safety of users nor the environment.

The core of the ReformTech products is a flexible platform that allows for the design of a compact and robust fuel reformer that can be adopted to a variety of fuels. Furthermore, the heaters can be scaled up and down in power to solve specific pains and contribute to specific needs and integration demands of our customers.

The compact design allows the system designer to create an efficient system with quick start-up times and lower energy demands on auxiliary components such as valves and compressors.



BENEFITS

Benefits:

- Robust heating system which starts also in extremely cold weather (below -30°C)
- Heating when the vehicle engine is switched off
- No more idling time for heating purpose
- No more cold starts of the engine
- Warm and nice cabin temperature
- Enables exhaust treatment heating

Results:

- Fuel reduction and cost savings (-15 %)
- Reduced carbon footprint (-15%)
- Ultralow emissions of NO_x, CO and particulates
- Prolonged lifetime of the vehicle engine
- Reduced maintenance costs and time

TRENDS IN MARKET

The trend of the ICE market is that engines are getting more and more efficient, and therefore almost all new diesel engines use an auxiliary heater to assist the engine. The same trend is also for the next generation gasoline engines and hybrids.

For diesel engines the trend is that by 2018 (Euro 6c/7 demands) the engines also need extra heat in the exhaust systems since the exhaust temperature is too low to heat the after-treatment system. This needs clean heat.

ReformTech has technology and products for all these challenges.

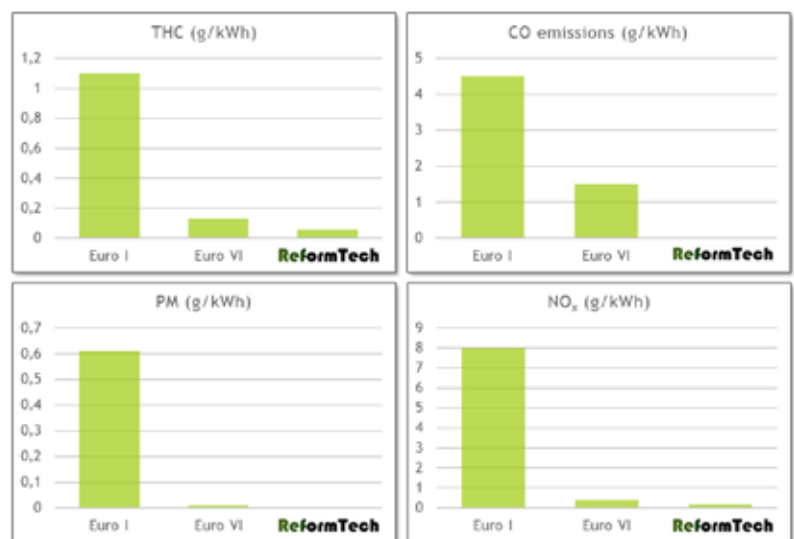
SURGE FOR CLEAN ENERGY

Increased fuel costs in combination with a steadily growing environmental awareness from customers in industry as well as in consumer markets has created a surge for clean and efficient heat and power solutions.

The worldwide acceptance of the definitive relationship between global warming and greenhouse gases has pressurized the legislators worldwide to introduce a series of new and strict environmental regulations.

Health problems connected to high concentrations of particles in the air is increasing resulting in premature deaths for millions of people globally.

As a natural consequence the drive for finding alternative power and heat solutions is increasing every day. ReformTech can through its unique technology platform contribute to a better tomorrow in mobile as well as in stationary applications.



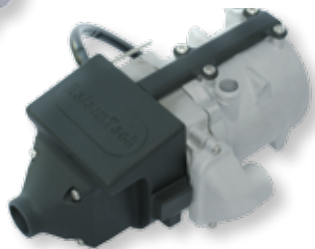
CLEAN HEATERS

ReformTech has designed a unique set of clean heaters with high thermal efficiency and ultralow emission of particles, carbon monoxide (CO) and nitrous oxides (NO_x). The heaters are equipped with an innovative start-up design which allows the user with instant heat from the burner.

The heater technology which is based upon ReformTech's clean fuel processing platform is a cost efficient alternative to the conventional heaters. The heaters are available for most logistical fuels including gasoline, diesel, natural gas and propane. The clean heaters can be customized to a customer's specific demands and can be designed for production of up to 100 kWth.

ReformTech's fuel driven heaters have many advantages:

- high efficiency (+80%)
- very low dangerous emissions (CO, NO_x, no particle matters and reduced CO₂)
- low cost and robust performance
- multifuel platform compatible with both renewable and fossil fuels
- modular and scalable design
- can be customized to customer's specific demands



CATALYTIC HEATERS

The achievement of a zero emissions system is possible if water is the only emission from the combustion process. This can only be achieved when burning pure hydrogen. It is however possible to completely eliminate the emission of poisonous chemicals by replacing the conventional heater with a catalytic heater from ReformTech.

Environmental catalysis is the art of improving the chemical efficiency of an existing process or product while at the same time significantly reducing or even eliminating the poisonous emissions that are harmful to our environment.

ReformTech has developed a unique set of catalytic burners with high thermal efficiency and ultralow emission of carbon monoxide (CO), nitrous oxides (NO_x) and particles. The heaters are fuel flexible and can be customized to a customer's specific demands and can be designed for production of up to 100 kWth.

The heaters are equipped with an innovative start-up design which provides instant heat from the burner to the user. The catalytic heaters are available for most logistical fuels (including gasoline, diesel, natural gas and propane). Most prior attempts with catalytic heaters run only on propane gas.

ReformTech's fuel driven catalytic heaters have many advantages:

- ultra low dangerous emissions (CO, NO_x, particle matters and reduced CO₂)
- higher efficiency (+80%)
- multifuel platform compatible with both renewable and fossil fuels
- directionally controllable heat radiation
- robust performance
- modular and scalable design



**ULTRA LOW
EMISSIONS**

**HIGH
EFFICIENCY**

**ROBUST
PERFORMANCE**

**COMPETITIVE
PRICE**

HEATER APPLICATIONS

- Parking heater
- Compartment heating
- Emission reductions through lower heater emissions
- Emission reductions through rapid clean heat up of catalyts in exhaust treatment systems
- Battery pre-heating and thermal management for cold-starts and continuous operation in cold weather
- Key component in total Thermal Management systems to meet current and future emission standards

APPLICATIONS & MARKETS

The ReformTech heaters are mainly utilized in automotive applications for heating of engine, exhaust system, compartment, and battery pre-heating.

Other applications are heating in mobile homes or boats as well as for other commercial and military applications where efficiency, signature and environmental impacts are vital to the user.

ReformTech's heater platform has also been optimized for use in stationary applications where parameters as efficiency, robustness, and cost are important.



ReformTech
www.reformtech.com

SWEDEN OFFICE:
+46-8-519 70 901

E-MAIL:
info@reformtech.com

VISITING ADDRESS:
Skalholtsgatan 2
SE-164 40 Kista
Sweden