

- + Innovative Recuperation Process.
- + Reduce Fuel Consumption (up to 10%).
- + Electricity From Exhaust Energy.
- + Reduce Emissions.



FS REGAINER+

OVERVIEW

With the FS REGAINER+ FUELSAVE offers an innovative & sustainable solution to save fuel & emissions, while generating free electricity (**4 kW continiuous engine output with 3,5 kW generator continiuous output**) without draining the onboard power system. For this we developed an intelligent recuperation process that transforms unused exhaust pressure (waste energy) in non-load phases of the engine into electricity to free the alternator and save money. All electricity that a vehicle usually consumes is being generated via the alternator / engine with Diesel and has a bad efficiency of around 35%, which is the most expensive way overall to generate electricity! The FS REGAINER+ revolutionizes the mobile electricity generation and achieves:

- Transformation of exhaust to electricity
- Relieving the alternator or retarder
- Save electriciry for on-demand use
- Save fuel & emissions

FUNCTION

The FS REGAINER+ uses wasted, mechanical energy of the exhaust and transforms it into usable electric energy.

1. A directly into the exhaust system integrated load-driven bypass directs the exhaust pressure to our engine/ energy transformer.
2. The exhaust gas flow offers depending on engine load a different working pressure. The pressure is being used by our FS ENGINE+ (highly efficient & innovative rotary piston engine) to transform it into energy.
3. The asynchronous generator driven by that pressure transforms the energy with as little loss as possible into electricity.
4. The generated electricity is being fed via a charging converter directly into the onboard power system or in a seperate battery storage
5. The processed exhaust is being fed again into the exhaust system after the bypass and before the exhaust gas treatment.

The amount of generated electricity and saved fuel primarily depends on the usage profile of the vehicle. The higher the non-load or breaking time / percentage, the higher the electricity that is being generated.

COMPONENTS

- a) BYPASS b) FS ENGINE+ c) GENERATOR d) LI-IO BATTERY

BENEFITS

FUEL CONSUMPTION REDUCTION

The consideration & calculation is simple - the more electricity your vehicle and specific application / use and the drivers needs, the higher the potential savings on diesel fuel. With an average reduction of diesel consumption at around 10% an average semi-trailer / vehicle with 100.000km yearly distance travelled, saves around 3.000 Euro - every year!

YOUR SAVINGS PER VEHICLE AT 100.000 KM/YEAR

Consumption in Liter		10	15	20	25	30	35	40
SAVINGS in %	6%	600 €	900 €	1.200 €	1.500 €	1.800 €	2.100 €	2.400 €
	7%	700 €	1.050 €	1.400 €	1.750 €	2.100 €	2.450 €	2.800 €
	8%	800 €	1.200 €	1.600 €	2.000 €	2.400 €	2.800 €	3.200 €
	9%	900 €	1.350 €	1.800 €	2.250 €	2.700 €	3.150 €	3.600 €
	10%	1.000 €	1.500 €	2.000 €	2.500 €	3.000 €	3.500 €	4.000 €
	11%	1.100 €	1.650 €	2.200 €	2.750 €	3.300 €	3.850 €	4.400 €
	12%	1.200 €	1.800 €	2.400 €	3.000 €	3.600 €	4.200 €	4.800 €
	13%	1.300 €	1.950 €	2.600 €	3.250 €	3.900 €	4.550 €	5.200 €

REDUCTION OF EMISSIONS

In parallel to reducing the fuel consumption also the CO2 emissions are being reduced, which makes your vehicles even greener & more attractive to the general public.

MOBILE FREE ELECTRICITY

The FS REGAINER+ generates mobile onboard electricity, which can be consumed directly or be stored in an external additional Li-Ion battery to be used on-demand when needed or fed into other systems (grid / e-mobility, etc.) .

ADVANTAGES

UNIQUE DIFFERENTIATORS

The patent pending FS REGAINER+ is worldwide the only product on the market that provides an economical solution for the use of mechanical exhaust energy to generate free electricity.

SECURITY

The FS REGAINER+ is being assessed and certified with operating license from TÜV. It is being adapted from experienced engineers to the corresponding manufacturers and models.

SHORT AMORTIZATION PERIOD

The investment into a FS REGAINER+ amortizes itself usually through the fuel savings within the first two years of the 3 year warranty period, extendable to a total of 9 years (3+3+3).

PRICES & QTY DISCOUNT SCHEMES

The FS REGAINER+ is being offered to end-customers directly or via partners for the following price:

1 unit:	6.999,- Euro net
>10	5%
>50	10%
>100	15%
>250	20%
warranty extension	upon request



REGAINER

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TECHNOLOGY

www.fuelsave.de