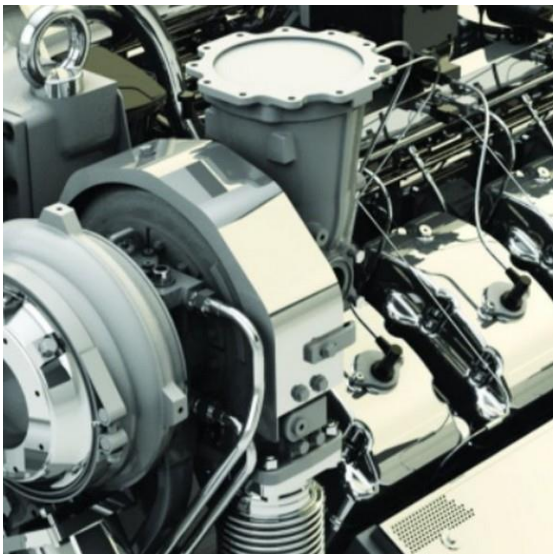
HeatVentors
The cool way to store heat!

Gas Engine Heat Recovery



Savings: 4 233 EUR / year
ROI: 2 years
Aim: Heat Recovery

Design parameters

Aim of HeatTank: Heat Recovery

Gas engine performance: 1 MW
Aim of gas engine: working in Virtual Power Plant system
Supply water temperature after gas engine stopped: 90°C
Heat loss until the supply water temperature reduce to 65°C: 1,13 GJ

Solution

1 pieces of HeatTank 50-1

Stores the extra heat.
Saves remanent heat.

HeatTank

Type: HeatTank 50-1

Capacity [kWh]: 50
Max. performance [kW]: 200
External Volume [m3]: 1,84
Connections [DN]: 42
Total weight [kg]: 1516

Benefits

Cost saving

The gas engine is working in a Virtual Power Plant system. When the gas engine generates more heat than the caloric centre needs,the extra heat uploads HeatTank and the PCM inside the HeatTank melts. When the storage is totally loaded and the water temperature is higher than 90°C part of the heat will be wasted. When the gas engine is not working because of the VPP control, the gas boilers have to generate the heat, which is more expensive. In this case we can use the pre-stored heat from HeatTank.

Use the remanent heat

The return of HeatTank mainly depends on the remanent heat. After the gas engine has been stopped, the supply water temperature does not reduce instantaneously but follows a cooling curve that depends on the gas engine's heat storage mass. However, this supply water temperature cools rapidly below the value expected by the gas boilers, so it can not be used. By using HeatTank we can afterheat this supply water which will be useable for the caloric center and this huge amount of heat will not be lost.

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2 years total ROI