



CASE STUDY

SPECIAL WASTE TREATMENT

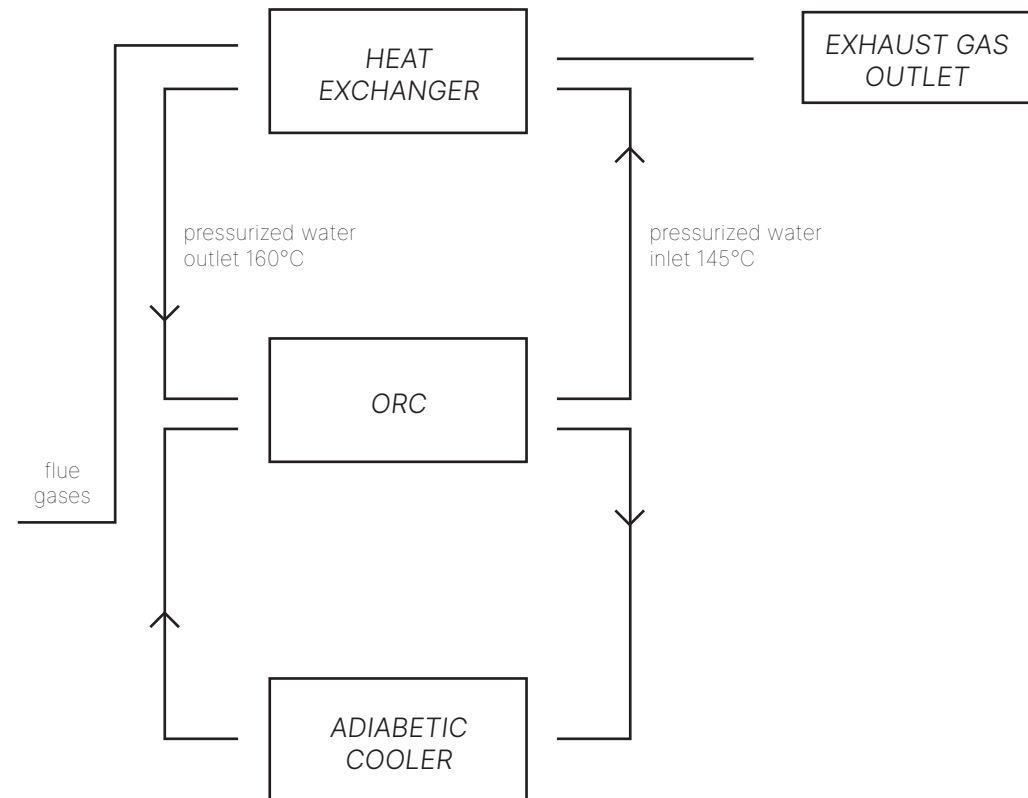
PRINCIPLE OF OPERATION

An incinerator is a waste disposal facility that works by destroying inert materials. In practice, **waste is burned** or, as the word itself suggests, 'incinerated'.

The **fumes** resulting from combustion must be adequately **monitored and filtered** and can be used in the Organic Rankine Cycle.



INCENERATOR



EXHAUST DATA

FLOW RATE

7 000 kg/h

TEMPERATURE

1050° C

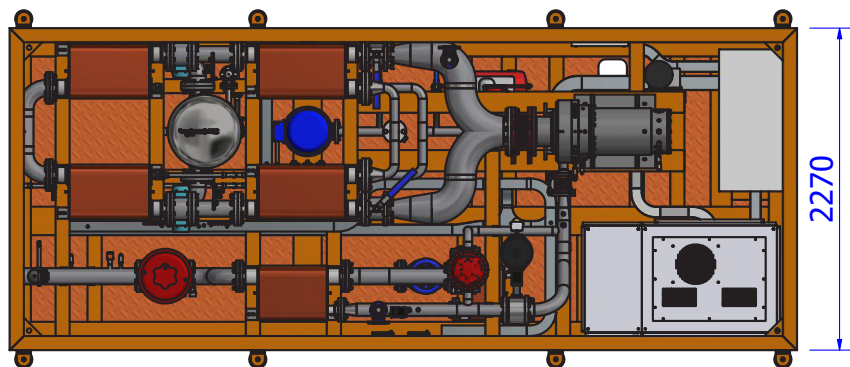
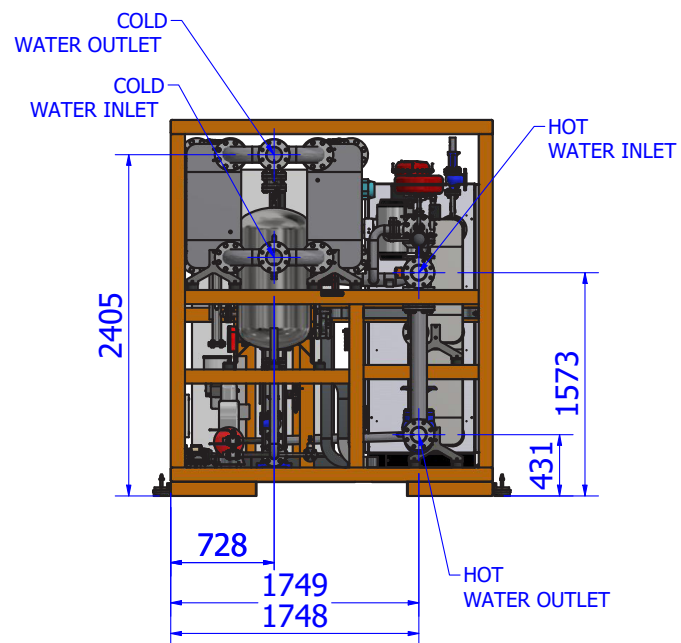
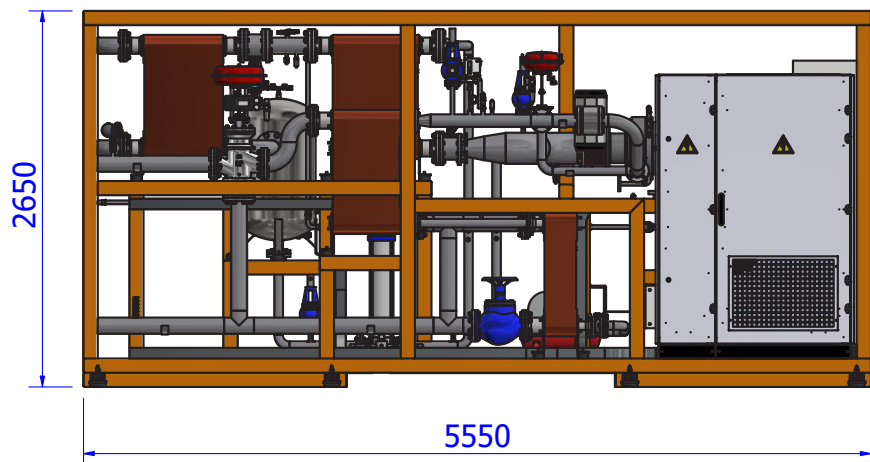
*AVAILABLE THERMAL
POWER*

2 000 kW

The heat available result suitable to feed one **ZE-200-LT**.

General Specifications	ZE-200-LT
Thermal power input	1400 kWt
Electric power output	200 kW _e
System efficiency	14.30 %
Skid dimensions (L x W x H)	5.6 x 2.3 x 2.65 m
Weight (incl. working fluid)	6200 Kg
Vector fluid	
Vector fluid	Pressurized water
Vector fluid input temperature	≥160°C
Vector fluid output temperature	145°C
Vector fluid nominal flowrate	21.65 kg/s
Condensation Stage	
Thermal power dissipation	1180 kWt
Cooling water input temperature	26°C
Cooling water output temperature	36°C
Cooling water nominal flowrate	28.25 kg/s
Turbine	
Type	Single stage, radial inflow turbine with fixed nozzles, directly coupled to generator
Working fluid temperature	145°C input / ~ 100°C output
Stage pressure	PS16 (tested up to 24 bar)
Materials	CNC Machined steel body / Aluminium alloy impeller
Working Fluid	
Type	Environmentally friendly, non-flammable HFC mixture
Operating temperature range	60°C ≤ T ≤ 165°C
Operating pressure	≤ 20 bar
Toxicity / Biodegradability / Ozone layer impact	Non-toxic / Full eco-compatibility / Ozone-friendly

LAYOUT ZE-200-LT



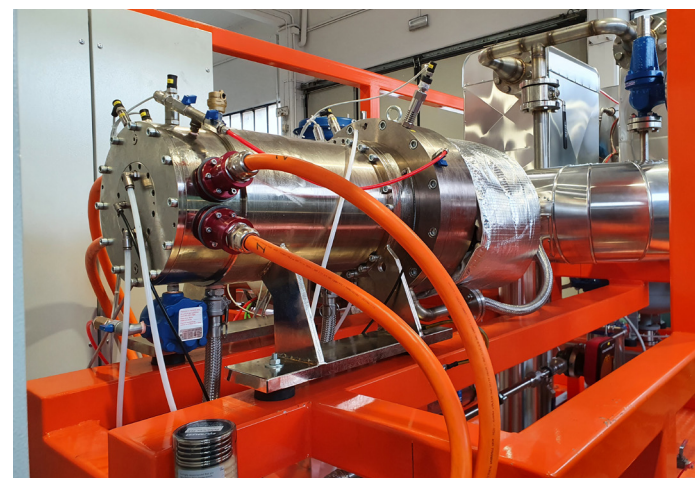
PHOTOS ZE-200-LT



ORC System - Shipping



ORC System - Test Area for final testing



ORC System - Turbine

ENVIRONMENT FRIENDLY

 **242**

TOE (Tonne Oil
Equivalent) SAVED PER YEAR

358 ton/y

CO₂ AVOID



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