

DATASHEET

ORC ENO-20LT



“ Generate power from your waste heat thanks to our ORC “

Founded in 2009, ENOGIA is a turbine based ORC manufacturer specialised in waste heat recovery with systems producing from 10 kWe to 180 kWe.

THE PRODUCT

The ENO-20LT module is an ORC manufactured by ENOGIA, able to recover until 320 kWth and having a nominal power output of 20 kWe even after low grade heat source at 70°C.



High speed patented micro-turbines



Assembling and performance testing in ENOGIA workshop



Hydraulic connections with standard flanges



Plug-and-play system on a single skid



Remote control and access 24/7



A SYSTEM COMBINING PERFORMANCE AND RELIABILITY

Designed with the same state of mind as the 10kWe ORC manufactured by ENOGIA, ENO-20LT is a turnkey solution involving few hydraulic and electrical modifications to be integrated with this system thanks to its kinetic turbine.

This ORC can be integrated on a wide range of applications such as biomass boilers, gas engines, geo-

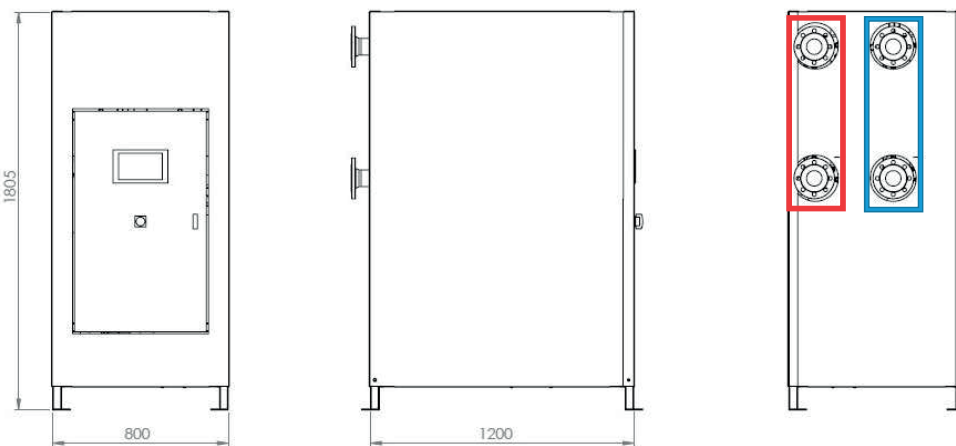
thermal sources, heating processes or concentrating solar panels. Any heat flow with temperatures between 70°C and 120°C can be recovered with this system.

In addition, it is possible to connect the cold loop of the ORC to a drying system, a floor heating system or greenhouses and reach global efficiency close to 95%!

ENO-20LT CHARACTERISTICS

| | | |
|---------------------------|------------------------------|---------------------------------|
| Electrical ratings | Maximum gross electric power | 20 kW _e |
| | Grid connection | 400V, 3ph, 50-60 Hz |
| Heat source | Temperature range | 70-120°C |
| | Thermal power input range | 160-320 kW _{th} |
| | Hot source medium | Water, steam, oil |
| | Hydraulic connections | DN 65, PN16 |
| Cold source | Temperature range | 0-60°C |
| | Working fluid | Water |
| | Cooling system | Dry cooler, cooling tower |
| | Hydraulic connections | DN 65, PN16 |
| Main components | Working fluid | R1233zd |
| | Generator | High speed, permanent magnet |
| | Expander | Kinetic turbine |
| | Heat exchangers | Brazed plate |
| | Pump | Multi-stage magnetic coupling |
| | Controls | Industrial PLC |
| | Monitoring | Remote web support |
| Main ratings | Weight | 900 kg |
| | Dimensions L x w x h | 1,2 m x 0,8 m x 1,8 m |
| | Environmental | IP 20 |
| | Noise level @10m | 60 dB |
| | Design lifetime | 20 yrs |
| | Safety | Non flammable, non toxic, ODP=0 |
| Norm compliance | Machine directive | 2006/42/EG |
| | PED | 2014/68/EU |
| | Electrical norms | 2014/35/EG |
| | Grid codes | VDE-0126 (G59, VDE-ARN, UL,...) |

DIMENSIONS



GOOD TO KNOW

This equipment should be installed as close as possible to the heat source to reduce heat losses through the pipes.