

DATASHEET ORC ENO-40LT

" Generate power from your waste heat "

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-40LT module is an ORC manufactured by ENOGIA, able to recover up to 640 kWth and having a nominal power output of 40 kWe from low temperature heat sources.



2 high speed patented micro-turbines



Hydraulic connections with standard flanges



Remote control and access 24/7



Assembling and performance testing in ENOGIA workshop



Plug-and-play system on a single skid



A SYSTEM COMBINING PERFORMANCE AND RELIABILITY

Designed with the same state of mind as the other ORC of the LT range, the ENO- 40LT is a turnkey product featuring ENOGIA's best technology.

This system suits a wide range of heat recovery applications such as biomass boilers, gas engines, geo- thermal sources, or industrial processes. Any heat flow with temperatures between 70°C and 120°C can be recovered with this system thanks to its two kinetic turbines.

The produced power is monitored by decoupling protection relays, ensuring its compliance with the grid.

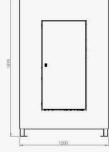
The remaining heat can be recovered for floor heating or drying system to reach a global efficiency close to 95%.

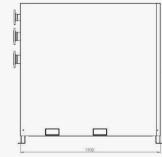
ENO-40LT CHARACTERISTICS

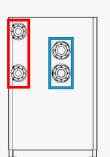
Electrical ratingsMaximum gross electric power Grid connection40 kWe 400V, 3ph, 50-60 HzHeat sourceTemperature range Thermal power input range Hydraulic connections70-120°C* 450-640 kWth Water, steam, oil DN 80, PN 16Cold sourceTemperature range Working fluid Cooling system Hydraulic connections0-55°C Dry cooler, cooling tower Dry cooler, cooling tower DN 100, PN 16Main componentsWorking fluid Generator ExpanderR1233zd High speed, permanent magnet Kinetic turbine Heat exchangers Pump Controls MonitoringR1233zd High speed, permanent magnet Kinetic turbine Heat exchangers Pump Multi-stage magnetic coupling Industrial PLC MonitoringR1233zd High speed, permanent magnet Kinetic turbine Heat exchangers Pump Multi-stage magnetic coupling Industrial PLC Monitoring1650 kg S0 dB B 20 yrs Nore level @10m Design lifetime Safety100 cole 20 yrs Non flammable, non toxic, ODP=0Norm complianceMachine directive PED Electrical norms Norm compliance2006/42/EG 2014/35/EG VDE-ARN, UL, etc.)			
Heat sourceThermal power input range Hot source medium Hydraulic connections450-640 kWth Water, steam, oil DN 80, PN 16Cold sourceTemperature range Working fluid Cooling system Hydraulic connections0-55°C Working fluid Water Cooling tower DV cooler, cooling tower Hydraulic connectionsMain componentsWorking fluid Generator Heat exchangers Pump Controls MonitoringR1233zd Brazed plate Industrial PLC MonitoringMain ratingsWeight Dimensions L x w x h Environmental Dise level @10m Besign lifetime Safety1650 kg Dimensions L x w x h Environmental Design lifetime 20 yrs SafetyNorm complianceMachine directive PED Electrical norms2006/42/EG 2014/35/EG	Electrical ratings	•	
Cold sourceWorking fluidWaterCooling systemDry cooler, cooling towerHydraulic connectionsDN 100, PN 16Main componentsWorking fluidR1233zdHeat exchangersBrazed platePumpMulti-stage magnetic couplingControlsIndustrial PLCMonitoringRemote web supportMain ratingsWeight1650 kgDimensions L x w x h1,9 m x 1,2 m x 1,9 mPusp Lifetime20 yrsSafetyNon flammable, non toxic, ODP=0Norm complianceMachine directive PED Electrical norms2006/42/EG 2014/68/EU 2014/35/EG	Heat source	Thermal power input range Hot source medium	450-640 kWth Water, steam, oil
Main componentsGenerator ExpanderHigh speed, permanent magnet Kinetic turbineMain componentsHeat exchangers PumpBrazed plate Multi-stage magnetic coupling Industrial PLC MonitoringMain ratingsWeight 	Cold source	Working fluid Cooling system	Water Dry cooler, cooling tower
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Norm compliancePED2014/68/EUElectrical norms2014/35/EG	Main ratings	Dimensions L x w x h Environmental Noise level @10m Design lifetime	1,9 m x 1,2 m x 1,9 m IP 20 60 dB 20 yrs
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* possibility to have >120°C with ORC MT









GOOD TO KNOW

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

