

Bowman Power Group's ETC product range delivers a step change in the efficiency of reciprocating engines.

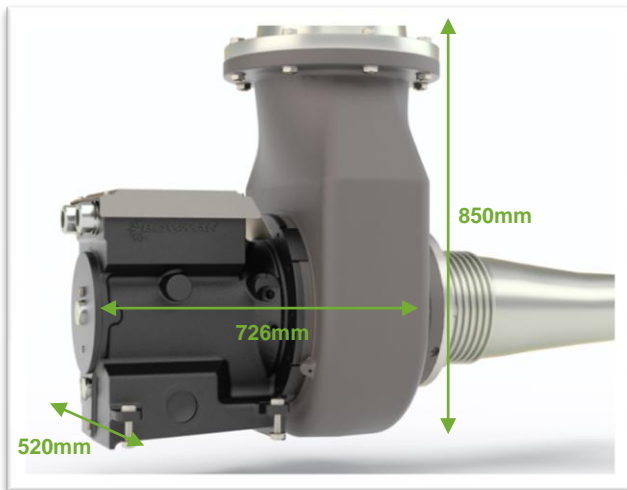
The ETC system consists of a turbo generator (TG) and a power electronics (PE) unit.

The host engine turbocharger is replaced or modified, but this is based on customer specific requirements and variables including host engine type, size, operating load and environment.

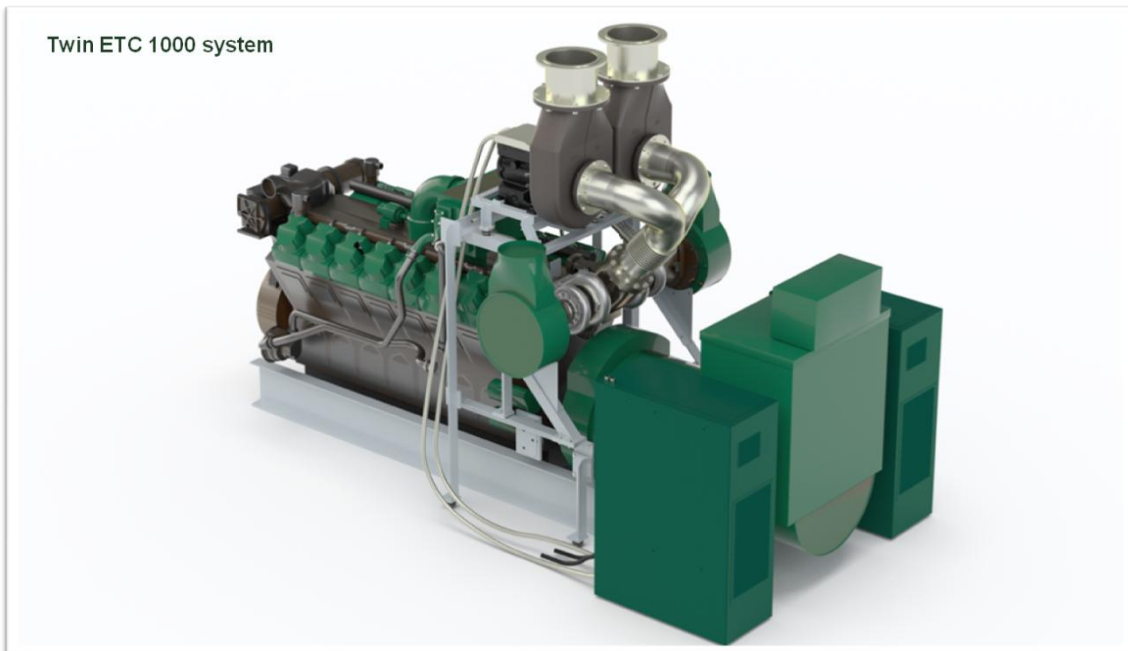
Please note that the application of the ETC system on-engine is also customer-specific, and therefore this information sheet does not include information about system ancillaries (hoses, brackets, frame etc.).

The **ETC 1000** is suited to gas and diesel-fuelled engines in the 600kW-1100kW range as a single system and 1100kW-2000kW engines as a twin system.

System components



- TG weight: up to 258kg (depending on variant).
- PE weight: 255kg (not including external brake or coolant).



ETC 1000 Turbo Generator

Electrical power	110 kWe max
Speed	30,000 rpm min to 36,000rpm max (voltage must remain within the safe operating area of the associated power electronics converter)
Alternator efficiency	98.0% (@110kWe, 30,000rpm) (dependant on conditions)
Operating temperature range	-15 to +55 °C (ambient air temperature)
Storage temperature	-25 to +60 °C

Power Electronics

Output voltage	400 VAC, 3 ph, ±10%
Output frequency	50 Hz or 60 Hz nominal / -6 Hz to +5 Hz
Output current	221 A RMS
Power factor (selectable range)	0.8 lead to 0.8 lag
Operating temperature range	-20 to +55 °C (ambient air temperature)
Storage temperature (power off)	-25 to +70 °C
EMC standard	EN 61000: (4.4, 5.4, 4.2, 6.4)
Vibration	Transport Simulation Random Vibration IEC 60068-2-64 Test Fh
Shock	IEC 60068-2-27
Ingress Protection Rating	IP23
Quality assurance system	ISO9001
Environmental system	ISO14001