

RECEIVED 27 APR 2020

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18.04.2020

**ElectroGas Malta Ltd**

**Unit Reference : CP 1 – CCGT Emergency generator set**

Thermal Input Calculation-

The nameplate rating of the unit has been provided.

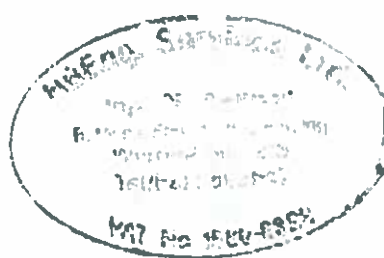
Perkins Engine Company ltd.

Serial Number 4008TAG1A

Maximum fuel in energy which can be utilized: 2191kWth

Power = 2.19MWth

Ing. Nicholas Bellizzi



## Energy balance

**Note:** Not to be used for CHP design purposes. (Indicative figures only). Consult Perkins Engines Company Limited. Assumes complete combustion.

### 4008TAG1A - Tropical - spill timing 16°

Designation	Units	Baseload power	Prime power	Standby power
Energy in fuel	kWt	1544	1957	2191
Energy in power output (gross)	kWb	644	805	882
Energy to cooling fan	kWm		38	
Energy in power output (net)	kWm	606	767	844
Energy to exhaust	kWt	492	606	712
Energy to coolant and oil	kWt	245	300	313
Energy to radiation	kWt	30	70	91
Energy to charge coolers	kWt	133	176	193

### 4008TAG1A - Temperate - spill timing 18°

Designation	Units	Baseload power	Prime power	Standby power
Energy in fuel	kWt	1544	1957	2191
Energy in power output (gross)	kWb	644	805	882
Energy to cooling fan	kWm		27	
Energy in power output (net)	kWm	617	778	855
Energy to exhaust	kWt	492	606	712
Energy to coolant and oil	kWt	245	300	313
Energy to radiation	kWt	30	70	91
Energy to charge coolers	kWt	133	176	193

### 4008TAG2A - Tropical - spill timing 14°

Designation	Units	Baseload power	Prime power	Standby power
Energy in fuel	kWt	1733	2273	2504
Energy in power output (gross)	kWb	719	899	962
Energy to cooling fan	kWm		38	
Energy in power output (net)	kWm	681	861	924
Energy to exhaust	kWt	548	688	795
Energy to coolant and oil	kWt	273	316	331
Energy to radiation	kWt	40	80	100
Energy to charge coolers	kWt	153	290	316

### 4008TAG2A - Temperate - spill timing 14°

Designation	Units	Baseload power	Prime power	Standby power
Energy in fuel	kWt	1733	2273	2504
Energy in power output (gross)	kWb	719	899	962
Energy to cooling fan	kWm		27	
Energy in power output (net)	kWm	692	872	935
Energy to exhaust	kWt	548	688	795
Energy to coolant and oil	kWt	273	316	331
Energy to radiation	kWt	40	80	100
Energy to charge coolers	kWt	153	290	316