



Specification Date	Fuel Type	Model
01 November 2011	Biogas & Sewage Gas CHP	Alfagy B500

Engine Specifications	Metric	Type
Manufacturer		SCHMITT ENERTEC
Type		SEMC-2312-KTAS
Speed	min <sup>-1</sup>	1,500
Displacement	litres	22.6
Cylinders		V12
Air intake		Lean burn, turbo & external cooling
Generator		400V~/50Hz/Synchronous

Performance Data	Metric	100% Load	75% Load	50% Load
Electrical power <sup>1</sup>	kWe	500	375	250
Total heat recovery <sup>2</sup>	+/- 8% kWt	427	354	277
Exhaust heat	+/- 8% kWt	163	131	96
Coolant heat	+/- 8% kWt	191	177	156
Mixture heat	+/- 8% kWt	73	46	25
Fuel input	+/- 5% kW	1215	949	680
Biogas use	+/- 5% Nm <sup>3</sup>	188	147	105
Electrical efficiency	%	41.2	39.5	36.5
Thermal efficiency	%	35.1	37.3	40.7
Total efficiency	%	76.3	76.8	77.4

System Parameters	Metric	Number	Dimensions
Flow temperature	max °C		90
Return temperature	max °C		70
Gas connection	RP		80/16
Heating water connection	DN/PN	x 2	65/16
Exhaust gas connection	DN/PN		250/6
Air requirement	Nm <sup>3</sup> / hour		13,900
Noise level with housing	dB(A) at 1 meter		70
Main Weight	L x W x H in meters		4.60 x 1.45 x 2.30
Gas composition			5,500

Separate data sheet

<sup>1</sup> At 50Hz; U=0.4 KV; pf = 1; NOx < 500 mg/Nm<sup>3</sup> & CO < 1000 mg/Nm<sup>3</sup>. Related to 65% CH<sub>4</sub> content in fuel gas.

<sup>2</sup> Exhaust temperature at 250°C

Note: Reference conditions are combustion air / ambient temperature < 27°C & site altitude < 300 meters above sea level

Subject to change without notice.