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CHP · Cogeneration · Combined Heat & Power · Power Generation · Onsite Electricity Production · Gas Generators · Gensets · Energy Efficiency · Distributed Energy Generation · Renewable Energy · Power Plant

Specification Date	Fuel Type	Model
01 February 2009	Biogas & Sewage Gas CHP	Alfagy B81

Engine Specifications	Metric	Type
Manufacturer		SCHMITT ENERTEC
Name		E0836 LE202
Speed	min ⁻¹	1,500
Displacement	litres	11.97
Cylinders		6 / in line
Air intake		Turbo, Lean Burn & Internal Cooling
Generator		400V~/50Hz/Synchronous

Performance Data	Metric	100% Load	75% Load	50% Load
Electrical power ¹	kWe	81	60	40
Total heat recovery ²	+/- 8% kWt	128	82	61
Exhaust heat	+/- 8% kWt	44	30	21
Coolant heat	+/- 8% kWt	84	51	39
Mixture heat	+/- 8% kWt	-	1	0
Fuel input	+/- 5% kWt	248	169	119
Biogas use ³	+/- 5% Nm ³	45.3	30.8	21.8
Electrical efficiency	%	32.6	35.6	33.5
Thermal efficiency	%	51.5	48.8	50.8
Total efficiency	%	84.1	84.4	84.3

System Parameters	Metric	Number	Dimensions
Flow temperature	max °C		90
Return temperature	max °C		70
Gas connection	RP		50/16
Heating water connection	DN/PN	x 2	65/16
Exhaust gas connection	DN/PN		100/6
Air requirement	Nm ³ / hour		4,314
Noise level with housing	dB(A) at 1 meter		70
Main	L x W x H in meters		3.6 x 1.05 x 2.05
Weight	kg		3,200
Gas composition	Separate data sheet		

¹ At 50Hz; U=0.4 KV; pf = 1; NO x < 500 mg/Nm³ & CO < 650 mg/Nm³

² Exhaust temperature at 180°C

³ Hu 10.02 kWh/Nm³

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