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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 B53

Engine Specifications	Metric	Type
Manufacturer		SCHMITT ENERTEC
Name		E0836-E302
Speed	min ⁻¹	1,500
Displacement	litres	6.9
Cylinders		6 / in line
Air intake		Naturally aspirated lean burn
Generator		400V~/50Hz/Synchronous

Performance Data	Metric	100% Load	75% Load	50% Load
Electrical power ¹	kWe	53	40	27
Total heat recovery ²	+/- 8% kWt	78	62	46
Exhaust heat	+/- 8% kWt	29	21	15
Coolant heat	+/- 8% kWt	49	41	31
Mixture heat	+/- 8% kWt	-	-	-
Fuel input	+/- 5% kWt	160	125	90
Biogas use ³	+/- 5% Nm ³	29.1	22.8	16.5
Electrical efficiency	%	33.2	31.9	29.3
Thermal efficiency	%	49.1	50.0	50.9
Total efficiency	%	82.3	81.9	80.2

System Parameters	Metric	Number	Dimensions
Flow temperature	max °C		90
Return temperature	max °C		70
Gas connection	RP		50/6
Heating water connection	DN/PN	x 2	50/60
Exhaust gas connection	DN/PN		125/6
Air requirement	Nm ³ / hour		3,343
Noise level with housing	dB(A) at 1 meter		70
Main	L x W x H in meters		2.8 x 0.85 x 1.8
Weight	kg		2,300
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