



# ALFAGY

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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 B809

Engine Specifications	Metric	Type
Manufacturer		SCHMITT ENERTEC
Type		SFGLD360/55
Speed	min <sup>-1</sup>	1,500
Displacement	litres	35.9
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	809	607	405
Total heat recovery <sup>2</sup>	+/- 8% kWt	781	625	487
Exhaust heat	+/- 8% kWt	257	208	158
Coolant heat	+/- 8% kWt	524	417	329
Mixture heat	+/- 8% kWt	-	-	-
Fuel input	+/- 5% kW	2,063	1,595	1,147
Biogas use	+/- 5% Nm <sup>3</sup>	376.5	291.1	209.3
Electrical efficiency	%	39.2	38.0	35.3
Thermal efficiency	%	37.8	39.2	42.5
Total efficiency	%	77.1	77.2	77.8

System Parameters	Metric	Number	Dimensions
Flow temperature	max °C		90
Return temperature	max °C		70
Gas connection	RP		Per Requirement
Heating water connection	DN/PN	x 2	Per Requirement
Exhaust gas connection	DN/PN		Per Requirement
Air requirement	Nm <sup>3</sup> / hour		15,165
Noise level with housing	dB(A) at 1 meter		70
Main	L x W x H in meters		6.6 x 2.3 x 3.0
Weight	kg		13,500
Gas composition	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>

<sup>2</sup> Exhaust temperature at 180°C

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