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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	Natural Gas	Alfagy N50

Engine Specifications	Metric	Type
Manufacturer		SCHMITT ENERTEC
Name		E0834-E302
Speed	min ⁻¹	1,500
Displacement	litres	4.6
Cylinders		4 / in line
Air intake		Naturally aspirated with Lambda probe
Generator		400V~/50Hz/Synchronous

Performance Data	Metric	100% Load	75% Load	50% Load
Electrical power ¹	kWe	50	38	25
Total heat recovery ²	+/- 8% kWt	74	62	50
Exhaust heat	+/- 8% kWt	29	22	15
Coolant heat	+/- 8% kWt	45	40	34
Mixture heat	+/- 8% kWt	-	-	-
Fuel input	+/- 5% kWt	143	115	89
Natural gas use ³	+/- 5% Nm ³	14.3	11.5	8.8
Electrical efficiency	%	34.9	32.6	28.2
Thermal efficiency	%	51.9	53.6	56.7
Total efficiency	%	86.8	86.2	84.9

System Parameters	Metric	Dimensions	Number	Result
Flow temperature	max °C			90
Return temperature	max °C			70
Gas connection	RP			1"
Heating water connection	DN/PN		x 2	40/60
Exhaust gas connection	DN/PN			65/6
Air requirement	Nm ³ / hour			3,197
Noise level with housing	dB(A) at 1 meter			70
Main dimensions	L x W x H in meters			2.8 x 0.85 x 1.9
Weight	kg			2,400
Gas composition	Separate data sheet			

¹ At 50Hz; U=0.4 KV; pf = 1; NO x < 250 mg/Nm³ & CO < 300 mg/Nm³

² Exhaust temperature at 120°C

³ Hu 10.02 kWh/Nm³

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