



| Specification Date | Fuel Type   | Model        |
|--------------------|-------------|--------------|
| 01 November 2011   | Natural Gas | Alfagy N1000 |

| Engine Specifications | Metric            | Type                   |
|-----------------------|-------------------|------------------------|
| Manufacturer          |                   | SCHMITT ENERTEC        |
| Name                  |                   | SE-MB-2312-GTA45       |
| Speed                 | min <sup>-1</sup> | 1,500                  |
| Displacement          | litres            | 45.2                   |
| Cylinders             |                   | V24                    |
| Air intake            |                   | Turbo                  |
| Generator             |                   | 400V~/50Hz/Synchronous |

| Performance Data                 | Metric                 | 100% Load | 75% Load | 50% Load |
|----------------------------------|------------------------|-----------|----------|----------|
| Electrical power <sup>1</sup>    | kWe                    | 1,000     | 750      | 500      |
| Total heat recovery <sup>2</sup> | +/- 8% kWt             | 1,216     | 980      | 734      |
| Exhaust heat                     | +/- 8% kWt             | 654       | 508      | 356      |
| Coolant heat                     | +/- 8% kWt             | 412       | 376      | 328      |
| Mixture heat                     | +/- 8% kWt             | 150       | 94       | 50       |
| Fuel input                       | +/- 5% kWt             | 2,546     | 1,988    | 1,424    |
| Natural gas use <sup>3</sup>     | +/- 5% Nm <sup>3</sup> | 254       | 198.2    | 142      |
| Electrical efficiency            | %                      | 39.5      | 37.7     | 35.1     |
| Thermal efficiency               | %                      | 47.7      | 49.3     | 51.5     |
| Total efficiency                 | %                      | 87.0      | 87.0     | 86.6     |

| System Parameters        | Metric                 | Dimensions | Number | Result            |
|--------------------------|------------------------|------------|--------|-------------------|
| Flow temperature         | max °C                 |            |        | 90                |
| Return temperature       | max °C                 |            |        | 70                |
| Gas connection           | RP                     |            | x 1    | DN50 PN16         |
| Heating water connection | DN/PN                  |            | x 2    | DN65 PN6          |
| Exhaust gas connection   | DN/PN                  |            |        | DN 250 PN6        |
| Air requirement          | Nm <sup>3</sup> / hour |            |        | 16,340            |
| Noise level with housing | dB(A) at 1 meter       |            |        | 70                |
| Main dimensions          | L x W x H in meters    |            |        | 7.0 x 1.65 x 2.45 |
| Weight                   | kg                     |            |        | 9,000             |
| Gas composition          | Separate data sheet    |            |        |                   |

<sup>1</sup> At 50Hz; U=0.4 KV; pf = 1; NO x < 500 mg/Nm<sup>3</sup> & CO < 300 mg/Nm<sup>3</sup>

<sup>2</sup> Exhaust temperature at 120°C

<sup>3</sup> Hu 10.02 kWh/Nm<sup>3</sup>

Note: Reference conditions are combustion air / ambient temperature 27°C & site altitude max. 300 meters above sea level; methane = 76%