



# ALFAGY

Kenton House, Oxford Street  
Moreton-in-Marsh, GL56 0LA  
United Kingdom  
www.alfagy.com

T: +44 87 0033 6600  
F: +44 20 7691 7685  
E: fm@alfagy.com



## Bio- and Sewage Gas Recommendations and Requirements

### Recommendation:

Even when the utility company provides a constant gas pressure there might be pressure variations due to on- and off- switching of further connected consumers. Irregular gas pressure leads to engine wear and tear as well as a irregular power frequency when exporting electricity. Therefore, Alfagy highly recommends that our customer installs a precision gas pressure regulator.

### Fuel Gas Quality Requirement:

The table below shows the parameter values of the Fuel Gas which have to be maintained at the interface to the SCHMITT ENERTEC unit to provide the scope of supply:

Bio- and Sewage Fuel Gas Quality Requirements using Schmitt Enertec CHP units	
Gas Quality Parameter	Values
Max./ Min. Temperature (°C)	30
Max. Relative Humidity (%)	60
Condensate	0
Dust:	
Max. particle size (µm)	5
Max. quantity (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	10
Hydrogen sulphide (ppm)	Max. 200
Total sulphur (mg/ Nm <sup>3</sup> )	Max. 300
Ammonia (mg/ Nm <sup>3</sup> )	< 38 (max. 50 ppm)
Arsenic (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 1
Mercury (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 1
Lead (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 2
Cadmium (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 10
Zinc (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 100
Phosphorus compounds and Halogens (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 5
Chloride (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 100
Silicon (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 5
Fluorine F (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 50
Total Chloride and Fluorine (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 100
Tar (mg/ Nm <sup>3</sup> )	< 20
Oil mist (mg/ Nm <sup>3</sup> CH <sub>4</sub> )	< 400

If exceeding any of the limit values listed above, the engine must be shut down and the service department of SCHMITT-ENERTEC GmbH and Alfagy Ltd. must be contacted immediately. The warranty for the engine is void if the CHP unit(s) is operated further after exceeding the Fuel Gas content limit values. Alfagy Ltd. and SCHMITT-ENERTEC GmbH will not guarantee for faults or damages (corrosion, contamination, wear and tear, etc.) caused by substances or gases in the supplied Fuel Gas that were unknown or not defined in writing at the time of signing the contract.