



**Specifications Biogas / Sewage gas CHP FMB-500-BSM / KSM**

Issue: 12.2010\_002 data sheet

**Engine specifications**

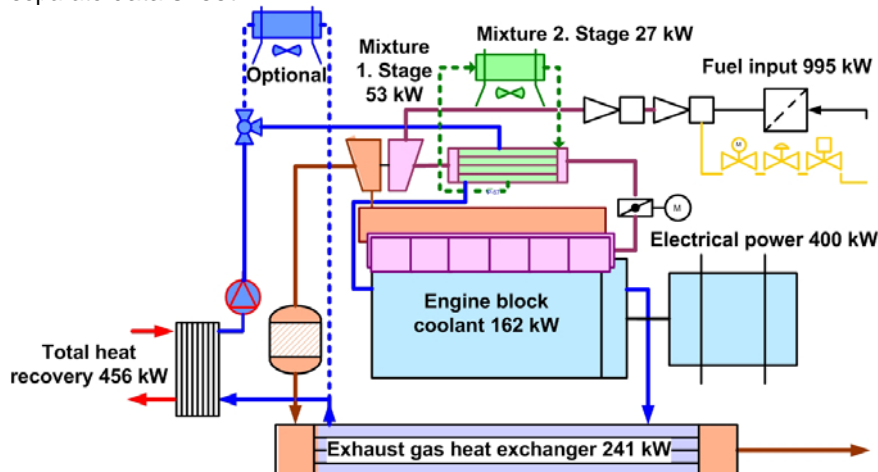
Manufacturer			SCHMITT ENERTEC
Type			SE-MB-2312-KTA45
Speed	min <sup>-1</sup>		1500
Displacement	Liter		22,6
Number of cylinders			12 / V
Aspiration	Lean burn engine turbo charged and 2-stage mixture cooling		
<b>Generator:</b> 400V~ / 50Hz / synchron / 355SB4	Time constants: [s] T <sup>do</sup> =1,95 / T <sup>d</sup> =0,16 / T <sup>sd</sup> =0,016		
Ta=0,022	Reaktanzen: [%] xd=290 / xq=160 / x'd=24 / x''d=12,2 / x'q=14,5 / x2= 13,4 / x0= 3,5		

**Performance data**

		100 %	75 %	50 %
Electrical power ) <sup>1</sup>	kW	400	300	200
Total heat recovery	+/- 8% kW	456	367	266
-Exhaust gas heat ) <sup>2</sup>	+/- 8% kW	241	187	127
-Coolant heat	+/- 8% kW	162	144	136
-Mixture heat	+/- 8% kW	53	35	3
Fuel input	+/- 5% kW	995	776	550
Consumption biogas (Hu 5,48)	+/- 5% Nm <sup>3</sup> / h	181,6	141,6	100,4
Electrical efficiency	%	40,2	38,6	36,3
Thermal efficiency	%	45,8	47,2	48,2
Total efficiency	%	86,0	85,8	84,6
CHP coefficient		0,88		

**System parameters**

Flow temperature	max. °C		90
Return temperature	max. °C		70
Gas connection	DN / PN		65 / 16
Heating water connection	DN / PN	2x	65 / 16
Exhaust gas connection	DN / PN		200 / 6
Mixture cooling connection	DN / PN	2x	40 / 16
Air requirement combustion + ventilation	Nm <sup>3</sup> / h		12.068
Noise level with housing	1m distance		70 dB(A)
Main dimensions	L x B x H [m]	4,0 x 1,45 x 2,45	
Weight	kg		5.500
Gas composition	separate data sheet		



)<sup>1</sup> at 50 Hz, U=0,4 KV, cos phi = 1 )<sup>2</sup> at exhaust gas temperature 120 °C (only in conjunction with gas cleaning and 20 ppm H2S / NOx < 500 mg/Nm<sup>3</sup> / CO < 650 mg/Nm<sup>3</sup>  
 Reference conditions: Combustion air / ambient temperature >+5°C / <+27 °C; Altitude at site <300 m