Voltage Frequency Voltage Frequency Voltage Frequency Voltage Frequency Voltage Voltag	Technical Data Sheet 93800051110_V03_en_GB	MTU 8V4000 GS GG08V4000A1		onsite energy		
Moceanismose (afty, 5 % Qu)	Voltage / Frequency	V / Hz	400	1	50	
Michatur coolor fast siage water temperature (in)	Cooling water temperature (in / out)			78 / 90		
Michael and stage water temperature (ni)	NOx emissions (dry, 5 % O ₂)	mg/m³ i.N.		< 500		
Catalytic convers	Mixture cooler 1st stage water temperature (in)					
Catalytic Convenient	Mixture cooler 2nd stage water temperature (in)					
Special equipment Affittio a favore sale level 10	Exhaust gas temperature	°C		427		
A	Catalytic converter			not included		
Combustion air temperature Co Relative combustion air humidity Standard geneficiation a in regulations Standard geneficiation a in a regulation Standard geneficiation a in a regulation Standard geneficiation Standard geneficiatio						
Security	Altitude above sea level		100	1	1000	
Sender specifications and regulations Sender specification Sen	Combustion air temperature	°C		25		
Electrical Power No. 100 75 50 50 100 175 50 50 100 175 50 50 100 175 50 50 100 175 50 100 175 50 50 100 175 50 175	Relative combustion air humidity	%		30		
Electrical Power P	Standard specifications and regulations					
Energy Input 451	Energy balance	%	100	75	50	
Themsel output total "Gene 15t stage minute cooler) "Gene 15t stage minute cooler) "Gene Gene	Electrical Power ^{2) 3)}	kW	1013	760	507	
Thermal output respine (block, Libe oil, 1st stage inviture cooler) file and provided in the cooler of 2nd stage file (1962) and provided in the cooler of 2nd stage file (196		kW	2304	1761	1240	
Thermal output moture cooler 1st stage	Thermal output total 6)	kW	483	351	245	
Thermain subjust institute cooler 2nd stage 6	Thermal output engine (block, lube oil, 1st stage mixture cooler) 6)	kW	483	351	245	
Exhaust hand (120°C) 6	Thermal output mixture cooler 1st stage ⁶⁾	kW				
Engine power SO 3046 1	Thermal output mixture cooler 2nd stage ⁶⁾	kW	68	46	30	
Engine power SO 3046 1	Exhaust heat (120 °C) 6)	kW	(486)	(404)	(311)	
Second perfection of "File of the Celebratical Efficiency"	Engine power ISO 3046-1 2)	kW	1040	783	526	
Electrical efficiency % 44.0 43.2 40.9 70.00 60.	Generator efficiency at power factor = 1	%	97.4	97.1	96.4	
Power consumption Power consumption Power consumption Power combustion air volume flow Power combustion air volume flow Power Po	Electrical efficiency 4)	%	44.0	43.2	40.9	
Combustion air / Exhaust gas m³ I.N.h 3884 2894 192 Combustion air mass flow kg/h 4990 3737 2560 Exhaust gas volume flow, vot ¹¹ m² I.N.h 3691 2200 2051 Exhaust gas volume flow, vot ¹¹ kg/h 1560 366 2652 Exhaust gas mass flow. wet kg/h 150 366 2652 Exhaust temperature after turbocharger "C 427 460 498 Reference fuel' "C 427 40 498 Reference fuel' "C 40 10 10 10 10 <td< td=""><td>Total efficiency</td><td>%</td><td>86.0</td><td>86.0</td><td>85.7</td></td<>	Total efficiency	%	86.0	86.0	85.7	
Combustion air volume flow, or combustion air mass flow m³ I.N.h 3864 2894 1982 Combustion air mass flow m² I.N.h 3991 2590 2550 Exhaust gas volume flow, ett "1" m² I.N.h 3891 2792 1880 Exhaust gas mass flow, well kg/h 5160 3866 2652 Exhaust gas mass flow, well kg/h 5160 3866 2652 Exhaust gas mass flow, well kg/h 5160 3866 2652 Exhaust gas mass flow, well kg/h 5160 3866 2652 Reference fuel "** 40 498 Reference fuel "** 40 498 Reference fuel "** 10 40 498 Exhaust gas emissions "** *** 10 01 50 1 Exhaust gas emissions "** MN 80 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Power consumption 7)	kW				
Combustion air mass flow Image I						
Combustion air mass flow kg/h 4990 3737 2560 Exhaust gas volume flow, vol. 10 m³ i N.h 3891 2290 2051 Exhaust gas volume flow, vol. 10 m³ i N.h 3891 2290 2051 Exhaust gas mass flow, wot kg/h 1500 3866 262 Exhaust games flow, wot c 427 460 498 Reference fueld 10 c 427 460 498 Reference fueld 10 c 427 460 498 Reference fueld 10 c 162 427 460 498 Reference fueld 10 c 162 162 498	Combustion air volume flow 1)	m³ i.N./h	3864	2894	1982	
Ehabast gas nos flow, ord, "1	Combustion air mass flow	kg/h	4990	3737	2560	
Ehaust age mass flow, well Ehaust segment author turboranger 100	Exhaust gas volume flow, wet 1)	m³ i.N./h	3991	2990	2051	
Ehabats temperature after turbocharger "Compense turb" 498 498 498 498 798 799 7	Exhaust gas volume flow, dry 1)	m³ i.N./h	3691	2762	1890	
Natural gas CH, 95 Val Ms Sewage gas not applicable not applica	Exhaust gas mass flow, wet	kg/h	5160	3866	2652	
Natural gas	Exhaust temperature after turbocharger	°C	427	460	498	
Sewage gas	Reference fuel 8)					
Biogas	Natural gas			CH ₄ >95 Vol.%		
Landfall gas	Sewage gas			not applicable		
Name	Biogas			not applicable		
Minimum methane number MN 80 Range of heating value: design/ operation range without power derating Wh/m³+ i.N. 10.0 - 10.5 / 8.0 - 11.0 Exhaust gas emissions ^{39 9} Wh/m³+ i.N. < 500 NOX. stated as NO₂ (sty, 5 % O₂) mg/m³+ i.N. < 100 HCHO (diy, 5 % O₂) mg/m³+ i.N. < 100 HCHO (diy, 5 % O₂) mg/m³+ i.N. < 100 Otc-gas engine, lean burn operation with turbocharging mg/m³+ i.N. < 100 Number of oringination 8 / V Engine speed 1/min 1500 Section 1500 Bore mm 1700 Stroke mm 1700 Stroke mm 10.5 Compression ratio mm 10.5 Compression ratio mm 10.5 Compression ratio mm 10.5 Compression ratio mbar - mbar 30 - 80 The state of the	Landfill gas			not applicable		
Range of heating values design/ operation range without power derating WM/m³ i.N. 10.0 - 10.5 / 8.0 - 11.0 Exhaust gas emissions ³99 mg/m³ i.N. < 500 VOX, stated as NO₂ (dy, 5 % O₂) mg/m³ i.N. < 1000 CO (dy, 5 % O₂) mg/m³ i.N. < 1000 VOX (dy, 5 % O₂) mg/m³ i.N. State of childers / configuration 8 / V Engine type mg/m³ i.N. 8 / V Engine type mm 170.0 150.0 150.0 150.0 150.0 150.0 150.0 150.0 150.0 15	Fuel requirements 9)					
No. stated as No. (dry, 5 % O.)	Minimum methane number	MN		80		
NOX. stated as NO_c (17, 5 % O₂) mg/m³ i.N. < 500 CO (dy, 5 % O₂) mg/m³ i.N. < 100	Range of heating value: design / operation range without power derating	kWh/m³ i.N.		10.0 - 10.5 / 8.0 - 11.0		
CO (dry, 5 % O ₂)						
HCHO (dry, 5 % O₂)		mg/m³ i.N.	< 500			
NCC Gry, 5 % O2)			< 1000			
Number of cylinders/ configuration 8 / N Engine type 8/4000L64		mg/m³ i.N.				
Number of cylinders / configuration 8 / V Engine type 11/min 15500 Bore 11/min 170.0 Stroke mm 210.0 Displacement dm³ 38.1 Mean piston speed m/s 10.5 Compression ratio m/s 114.0 BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption 100 dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator Rating power (temperature rise class F) 110 kVA 1,770 Insulation class / temperature rise class F) 110 kVA 1,770 Insulation class / temperature rise class for presture (rise class for presture for presture (rise class for presture for prest		mg/m³ i.N.				
Engine type 8V4000L64 Engine speed 11/min 1500 Bore mm 1700 Stroke mm 210.0 Displacement dm³ 38.1 Mean piston speed m/s 10.5 Compression ratio bar 21.8 BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption ^{10j} dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator mbar - mbar 30 - 60 Rating power (temperature rise class F) ^{51j} kVA 1,770 Insulation class / temperature rise class F) ^{51j} kVA 1,770 Insulation class / temperature rise class F / F Vivinding pitch 2/3 2/3 Protection IP 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ^{12j} 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10/ ± 5 Engine cooling water system ° C 78 / 90 Coolant temperature (in / out), design <td></td> <td></td> <td></td> <td></td> <td></td>						
Engine speed	Number of cylinders / configuration		8	/	V	
Bore mm 170.0 Stroke mm 210.0 Displacement dm² 38.1 Mean piston speed m/s 10.5 Compression ratio bar 21.8 BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption ¹⁰⁾ dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator WVA 1770 Rating power (temperature rise class F) ¹¹⁾ kVA 1770 Insulation class / temperature rise class F) ¹² kVA 1770 Insulation class / temperature rise class F) ¹³ kVA 1770 Insulation class / temperature rise class F) ¹⁴ kVA 1770 Insulation class / temperature rise class F) ¹³ kVA 1770 Insulation class / temperature rise class F) ¹⁴ kVA 1770 Insulation class / temperature rise class F) ¹⁵ kVA 1770 Insulation class / temperature rise class F) ¹⁶ kVA 1770 Insulation class / temperature rise class F) ¹⁶ R/F W<	Engine type					
Stroke mm 210.0 Displacement dm³ 38.1 Mean piston speed m/s 10.5 Compression ratio 14.0 14.0 BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption ¹⁰ dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator Rating power (temperature rise class F) ¹¹ kVA 1770 Insulation class / temperature rise class F) ¹² kVA 1770 Insulation class / temperature rise class F) ¹³ kVA 1770 Insulation class / temperature rise class F) ¹⁴ kVA 1770 Insulation class / temperature rise class F) ¹⁵ kVA 1770 Insulation class / temperature rise class F) ¹⁶ kVA 1770 Insulation class / temperature rise class F) ¹⁸ kVA 1770 Insulation class / temperature rise class F) ¹⁸ kVA 1770 Insulation class / temperature rise class F) ¹⁸ kVA 1770 Insulation class / temperature rise class Rulation class / temperature rise c		1/min		1500		
Displacement dm³ 38.1 Mean piston speed m/s 10.5 Compression ratio 14.0 14.0 BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption **(0) dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar - mbar 30 - 60 Cenerator Rating power (temperature rise class F) **(1) kVA 1770 Insulation class F, temperature rise class F / F Winding pitch 2/3 F Protection IP 23 P Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ** % ± 10 / ± 5 Engine cooling water system Colant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant **13*14*) Cv value **13*15*) bar / m³/h 37.5 Pressure drop, design **10* Cv value **13*15*) bar / m³/h 1.53 / 30.8 Max. allowable for engine) bar / m³/h 1.53 / 30.8 </td <td></td> <td></td> <td></td> <td></td> <td></td>						
Mean piston speed m/s 10.5 Compression ratio 14.0 BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption 100 dm²/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator Rating power (temperature rise class F) 110 kVA 1770 Insulation class / temperature rise class F) 110 kVA 1770 Insulation class / temperature rise class F) 110 kVA 1770 Insulation class / temperature rise class F) 110 kVA 1770 Insulation class / temperature rise class F) 110 kVA 1770 Insulation class / temperature rise class F) 110 kVA 1770 Winding pitch 2/3 Protection 1P 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) 12 % ±10 / ±5 English cooling water system ** ±10 / ±5 English cooling water system ** ** ** <td colspa<="" td=""><td></td><td></td><td></td><td></td><td></td></td>	<td></td> <td></td> <td></td> <td></td> <td></td>					
Compression ratio 14.0 BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption ¹⁰⁾ dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator Rating power (temperature rise class F) ¹¹⁾ kVA 1770 Insulation class / temperature rise class F (F) F Winding pitch 2/3 F/F Vinding pitch 2/3 P Protection 1P 23 8 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ¹²⁾ 0.8 / 0.95 1P 23 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system Coolant temperature (in / out), design °C 78 / 90 Coolant temperature (in/ out), design °C 78 / 90 Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} bar / m³/h 1.53 / 30.8 Max. appearature (in / out), design °C C C C C C C C						
BMEP at nominal engine speed min-1 bar 21.8 Lube oil consumption 100 dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator Winding prower (temperature rise class F) 110 kVA 1,770 Insulation class / temperature rise class F / F F / F Winding pitch 2/3 2/3 Protection IP 23 2/3 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) 120 0.8 / 0.95 2/3 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Coolant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant 130 140 w3/h 37.5 Pressure drop, design 140 Cv value 130 150 bar / m3/h 1.53 / 30.8 Max. operation pressure (coolant before engine) bar / m3/h 1.53 / 30.8 Exhaust gas temperature (in / out), design °C °C Coolant temperature (in / out), design °C °C <td></td> <td>m/s</td> <td></td> <td></td> <td></td>		m/s				
Lube oil consumption 100 dm³/h 0.18 Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator Rating power (temperature rise class F) 110 kVA 1770 Insulation class / temperature rise class F / F Winding pitch 2/3 Protection IP 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) 120 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system Coolant temperature (in / out), design ° C 78 / 90 Coolant flow rate, constant 13/14) m³/h 37.5 Pressure drop, design 140 Cv value 13/15) bar / m³/h 1.53 / 30.8 Exhaust gas temperature (cout) ° C Coolant temperature (in / out), design ° C Coolant volumetric flow, constant 13/14) ° C Coolant temperature (in / out), design ° C <td></td> <td></td> <td></td> <td>14.0</td> <td></td>				14.0		
Exhaust back pressure min max. after module mbar - mbar 30 - 60 Generator Rating power (temperature rise class F) ¹¹⁾ kVA 1770 Rating power (temperature rise class F) ¹¹⁾ kVA 1770 Insulation class / temperature rise class F / F Winding pitch 2/3 Protection IP 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ¹²⁾ 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system ***						
Generator Rating power (temperature rise class F) **110 kVA 17770 Insulation class / temperature rise class F / F Winding pitch 2/3 Protection IP 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) **12' 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system ***C 78 / 90 Coolant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant **(3) **14') m³/h 37.5 Pressure drop, design **14') Cv value **13) **15') bar / m³/h 1.53 / 30.8 Max. operation pressure (coolant before engine) bar / m³/h 6.0 6.0 Exhaust gas heat exchanger (EGHE) ***C ***C Coolant temperature (un/ out), design °C ***C Coolant volumetric flow, constant **13 ! 14') m³/h ****C Coolant volumetric flow, constant **13 ! 14') m³/h ****C Fressure drop, design **4* Cv value ***13 ! 15') kPa / m³/h / <t< td=""><td></td><td></td><td>0.18</td><td></td><td></td></t<>			0.18			
Rating power (temperature rise class F) 11) kVA 1770 Insulation class / temperature rise class F / F Winding pitch 2/3 Protection 1P 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) 12 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system Coolant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant 13 / 14) 37.5 Pressure drop, design 14) Cv value 13 / 15) bar / m³/h 1.53 / 30.8 Max. operation pressure (coolant before engine) bar 6.0 Exhaust gas temperature (out) °C Coolant temperature (out), design °C Coolant temperature (out), design °C Coolant temperature (out), design °C Coolant volumetric flow, constant 13 / 14 Pressure drop, design 14 Cv value 13 / 15 Pressure drop, design 14 Cv value 13 / 15 Pressure drop, design 14 Cv value 13 / 15 Pressure drop, design 14 Cv value 13 / 15 Pressure drop, design 14 Cv value 13 / 15 Pressure drop, design 14 Cv value 13 / 15 Min. coolant flow rate / min. operation gauge pressure Min. coolant flow rate / min. operation gauge pressure	·	mbar - mbar		30 - 60		
Insulation class / temperature rise class						
Winding pitch 2/3 Protection IP 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ¹²⁾ 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system C 78 / 90 Coolant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant ^{13) 14)} m³/h 37.5 Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} bar / m³/h 1.53 / 30.8 Max. operation pressure (coolant before engine) bar 6.0 Exhaust gas heat exchanger (EGHE) Exhaust gas temperature (out) °C C Coolant temperature (in / out), design °C Coolant temperature (in / out), design °C C Coolant temperature (in / out), design °C Fressure drop, design ¹⁴⁾ Cv value ^{13) 15)} kPa / m³/h / Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} kPa / m³/h / Min. coolant flow rate / min. operation gauge pressure m³/h / bar /		kVA				
Protection IP 23 Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ¹²⁾ 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system Coolant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant ^{13) 14)} m³/h 37.5	·					
Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) 12) 0.8 / 0.95 Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system Coolant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant 13) 14) m3/h 37.5						
Voltage tolerance / frequency tolerance % ± 10 / ± 5 Engine cooling water system Coolant temperature (in / out), design °C 78 / 90 Coolant flow rate, constant 131/4) m3/h 37.5 5 Coolant flow rate, constant 151/4) bar / m3/h 1.53 / 30.8 Max. operation pressure (coolant before engine) bar 6.0 6.0 Exhaust gas heat exchanger (EGHE) C 5 6 5 5 6 5 5 6 5 6 7 6 5 6						
Engine cooling water system Coolant temperature (in / out), design Coolant flow rate, constant 13) 14) Pressure drop, design 14) Covalue 13) 15) Max. operation pressure (coolant before engine) Exhaust gas heat exchanger (EGHE) Exhaust gas temperature (out) Coolant temperature (in / out), design CV value 13) 15)						
Coolant temperature (in / out), design C 78 / 90 Coolant flow rate, constant 13) 14)		%		± 10 / ± 5		
Coolant flow rate, constant ^{13/14)} Pressure drop, design ¹⁴⁾ Cv value ^{13/15)} Bar / m³/h 1.53 / 30.8 Max. operation pressure (coolant before engine) Exhaust gas heat exchanger (EGHE) Exhaust gas heat exchanger (Unt) Coolant temperature (unt), design °C Coolant temperature (in / out), design °C Coolant volumetric flow, constant ^{13/14)} Pressure drop, design ¹⁴⁾ Cv value ^{13/15)} KPa / m³/h Min. coolant flow rate / min. operation gauge pressure m³/h / bar /						
Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} bar / m³/h 1.53 / 30.8 Max. operation pressure (coolant before engine) bar 6.0 Exhaust gas heat exchanger (EGHE) Exhaust gas heat exchanger (out) °C Coolant temperature (out), design °C Coolant temperature (in / out), design °C Coolant volumetric flow, constant ^{13) 14)} m³/h Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} kPa / m³/h / for / Min. coolant flow rate / min. operation gauge pressure m³/h / bar /						
Max. operation pressure (coolant before engine) Exhaust gas heat exchanger (EGHE) Exhaust gas temperature (out) Coolant temperature (in / out), design °C Coolant volumetric flow, constant 13) 14) Pressure drop, design 14) Cv value 13) 15) KPa / m³/h Min. coolant flow rate / min. operation gauge pressure bar °C C C R A Bin A A Bin A A A A A A A A A A A A A	Coolant flow rate, constant					
Exhaust gas heat exchanger (EGHE) Exhaust gas temperature (out) Coolant temperature (in / out), design ° C Coolant volumetric flow, constant 13) 14) Pressure drop, design 14) Cv value 13) 15) KPa / m³/h Min. coolant flow rate / min. operation gauge pressure m³/h / bar /			1.53	· · · · · · · · · · · · · · · · · · ·	30.8	
Exhaust gas temperature (out) Coolant temperature (in / out), design °C Coolant volumetric flow, constant 13) 14) Pressure drop, design 14) Cv value 13) 15) kPa / m³/h Min. coolant flow rate / min. operation gauge pressure m³/h / bar /		bar		6.0		
Coolant temperature (in / out), design °C Coolant volumetric flow, constant ^{13) 14)} m³/h Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} kPa / m³/h / Min. coolant flow rate / min. operation gauge pressure m³/h / bar /	, ,					
Coolant volumetric flow, constant ^{13) 14)} Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} KPa / m³/h / Min. coolant flow rate / min. operation gauge pressure m³/h / bar /						
Pressure drop, design ¹⁴⁾ Cv value ^{13) 15)} kPa / m³/h / Min. coolant flow rate / min. operation gauge pressure m³/h / bar /	Coolant temperature (in / out), design					
Min. coolant flow rate / min. operation gauge pressure m³/h / bar /	Coolant volumetric flow, constant (13) (14)					
Max. operation pressure (coolant water) bar	Min. coolant flow rate / min. operation gauge pressure	m3/h / har		/		

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Mixture cooler 1st stage, external						
Coolant temperature (in / out), design		°C				
Coolant volumetric flow, design, constant 13) 14)		m³/h				
Pressure drop, design ¹⁴⁾	Cv value 13) 15)	bar / m³/h			/	
Min. coolant flow rate / min. operation gauge pressure		m³/h / bar			/	
Max. operation pressure before mixture cooler		bar				
Mixture cooler 2nd stage, external						
Coolant temperature (in / out), design		°C	43 / 45.1			
Coolant volumetric flow, design, constant 13) 14)	40) 45)	m³/h	30.0			
Pressure drop, design ¹⁴⁾	Cv value 13) 15)	bar / m³/h	0.48		/	44.3
Max. operation pressure before mixture cooler		bar			6	
Heating circuit interface						
Engine coolant temperature (in / out), design		°C				
Heating water temperature (in / out), design		°C				
Heating water flow rate, design 14) 16)		m³/h				
Pressure drop, design ¹⁴⁾	Cv value 15) 16)	bar / m³/h			/	
Max. operation gauge pressure (heating water)		bar				
Room ventilation						
Genset ventilation heat ¹⁷⁾		kW			52	
Inlet air temperature: (min./design/max.)		°C		20 / 2		
Min. engine room temperature ¹⁸⁾		°C		1		
Max. temperature difference ventilation air (in / out)		K		20		
Min. supply air volume flow rate (combustion + ventilation)	19)	m³ i.N./h		12500		
Gearbox		%	100	7	75	50
Efficiency		%	-		-	-
Starter battery						
Nominal voltage / power / capacity required		V / kW / Ah		24 / 9	9.0 /	
Filling quantities						
Lube oil for engine		dm³			00	
Coolant in engine		dm³			35	
Coolant in mixture cooler		dm³		1	5	
Heating water for plate heat exchanger 20)		dm³				
Lube oil for gearbox		dm³				
Gas regulation line						
Nominal size / gas pressure min max.		DN / mbar - mbar	80		/	120 - 250
Engine sound level 21) (1 meter distance, free field) +3	dB(A) for total A-weighted					
Frequency		Hz	63	125	250	500
Sound pressure level		dB	79.3	89.1	90.0	92.6
Frequency		Hz	1000	2000	4000	8000
Sound pressure level		dB	92.2	89.2	88.8	100.0
		Lin dB	102.3			
Sum of pressure levels		dB A	101.0			
Sound power level		dB	120.0			
Undampened exhaust noise ²¹⁾ (1 meter distance to out	tlet within 90°, free field) +3	` '				
Frequency		Hz	63	125	250	500
Sound pressure level		dB	95.2	112.7	104.4	93.0
Frequency		Hz	1000	2000	4000	8000
Sound pressure level		dB	88.0	84.1	79.5	69.3
		Lin dB	113.9			
Sum of pressure levels		dB A	99.6			
Sound power level		dB	112.1			
Dimensions (aggregate)						
Length		mm		~ 4	200	
AAC 101						

- Systems and consumables have to conform to the following actual company standards: 1) Normal cubic meter at 1013 mbar and T = 273 K
- 2) Prime power operation will be designed specific to the project
- 3) Generator gross power at nominal voltage, power factor = 1 and nominal frequency
- 4) According to ISO 3046 (+ 5 % tolerance), using reference fuel used at nominal voltage, power factor = 1 and nominal frequency
- 5) Emission values during grid parallel operation
- 6) Thermal output at layout temperature; tolerance +/- 8 %
- Power consumption of all electrical consumers which are mounted at the module / genset
- 8) Deviations from the layout parameters respectively the reference fuel can have influence on the obtained efficiency and exhaust emissions
- 9) Functional capability

Gross weight (dry weight)

Combustion air temperature

Mixture cooler coolant temperature (in)

Boundary conditions and consumables

Power derating
Altitude

Methane number

Width

Height

- 10) Reference value at nominal load (without amount of oil exchange)
- 11) Genset max. 1000 m height of location and max. 40 °C intake air temperature; else power derating
- 12) Max. allowable cos phi at nominal power (view of producer)
- 13) Stated values for cooling fluid composition 65% water and 35% glycol, adaption for use of other cooling fluid composition necessary The system design must consider the tolerance.
- 14) Pressure loss at reference flow rate
- 15) The Cv value declares the volumetric flow in m³/h at a pressure drop of 1 bar. Min. and max. flow rate limits are defined.
- 16) Stated values for pure water, adaption for other cooling fluid composition necessary
- 17) Only generator- and surface losses
- 18) Frost-free conditions must be guaranteed
- 19) Amount of ventilation air must be adapted to the gas safety concept
- 20) Assemblies including pipe work
- 21) All sound pressure levels at nominal load
- 22) Max. admissible cos phi depending on voltage in accordance with the requirements of the BDEW Mittelspannungsrichtlinie (German Medium Voltage Directive)

EDAM / EDAT

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mm

mm

kg

~ 2000

~ 2300

~ 10350 (~ 10000)

specific to the project

specific to the project

specific to the project

specific to the project

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