



Technical Data Sheet		GB1941N6			
93800050007_V04_US		with engine		20V4000L62	
Fuel		Natural gas			
Voltage / Frequency		480 V		60 Hz	
Heating water temperatur (in/out)		°F /			
NOx emissions (dry) ¹⁾		g/bhp-hr 1			
Intercooler 2nd stage temperatur (in)		°F 104			
Exhaust gas temperature after heat exchanger		°F 854			
Electrical power COP, parallel to grid acc. ISO 8528-1		100		75 50	
Electrical power PRP, prime power acc. ISO 8528-5 G1		%			
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Energy balance					
Electrical power ^{2) 3)}		kWe		1941 1450 958	
Energy input ^{5) 7)}		kBTU/hr		16123 12405 8674	
Thermal output total ⁴⁾		kBTU/hr		3708 2716 1863	
Thermal output engine (block, lube oil, 1st stage intercooler) ⁴⁾		kBTU/hr		3708 2716 1863	
Exhaust heat (248 °F) ⁴⁾		kBTU/hr		(3736) (3089) (2281)	
Thermal output 2nd stage intercooler ⁴⁾		kBTU/hr		431 320 222	
Engine power ISO 3046-1 ³⁾		bhp		2682 2012 1341	
Generator efficiency at power factor = 1		%		97,6 97,3 96,6	
Electrical efficiency ^{5) 6)}		%		41,1 39,9 37,7	
Total efficiency		%		64,1 61,8 59,2	
CHP Coefficient				0,52 0,53 0,51	
Power consumption ¹⁵⁾		kWe			
Combustion air / Exhaust gas					
Combustion air volume flow ¹⁾		ft³/min		4593 3472 2374	
Combustion air mass flow		lb/hr		22218 16795 11481	
Exhaust gas volume flow, wet ¹⁾		ft³/min		4817 3645 2495	
Exhaust gas volume flow, dry ¹⁾		ft³/min		4307 3253 2222	
Exhaust gas mass flow, wet		lb/hr		22982 17384 11892	
Exhaust temperature after turbocharger		°F		854 910 962	
Reference fuel					
Natural gas		CH ₄ > 95 Vol. %			
Sewage gas		not applicable			
Biogas		not applicable			
Landfill gas		not applicable			
CO ₂ / CH ₄ volume ratio					
Minimum methane number		MN		70	
Range of heating value: design / operation range		BTU/ft³		1014.5 / 773.0 - 1062.8	
Exhaust gas emissions ^{6) 7)}					
NOx, stated as NO ₂ (dry)		g/bhp-hr		1	
CO (dry)		g/bhp-hr		2	
HCHO (dry) ⁷⁾		g/bhp-hr			
VOC (dry)		g/bhp-hr		0,7	
Otto-gas engine, lean burn operation with turbocharging					
Number of cylinders / configuration		20 V			
Engine typ		20V4000L62			
Engine speed		rpm		1500	
Bore		in		6,7	
Stroke		in		8,3	
Displacement		in³		5817,5	
Mean piston speed		ft/sec		34,4	
Compression ratio		12,8			
BMEP at nominal engine speed min-1		psi		243,4	
Lube oil consumption ⁸⁾		gal/hr		0,18	
Max. exhaust back pressure after engine		in H ₂ O		24,11	
Generator					
Rating power (F)		kVA		2583	
Max. allowable p.f. inductive (overexcited) / capacitive (underexcited) ¹⁶⁾		0.8 / 1.0			
Voltage tolerance / frequency tolerance		± 5.0 / ± 5.0			
Max. ambient temperature		°F		104	
Max. installation altitude		ft		3281	
Engine cooling water system					
Coolant temperature (in/out)		°F		172 / 194	
Coolant flow rate ⁹⁾		gal/min		339,02 @ 26,1 psi delta p	
CVs value (Block, lubeoil and 1st stage) ¹⁰⁾		66,4			
Max. operation pressure (coolant before engine)		psi		87	
Exhaust gas heat exchanger (EGHE)					
Exhaust gas temperature (out)		°F			
Coolant temperature (in/out)		°F		/	
Coolant volumetric flow ⁹⁾		gal/min		@ psi delta p	
CVs value ¹⁰⁾					
Max. operation pressure (coolant water)		psi			

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Oilcooler, external					
Coolant temperature (in/out)				@	psi delta p
Coolant volumetric flow ⁹⁾					
CV-Value ¹⁰⁾					
Max. operation pressure					
Intercooler 2nd stage, external					
Coolant temperature (in/out)	°F	104 / 108			
Coolant volumetric flow ⁹⁾	gal/min	136,49	@	14,504	psi delta p
CVs value ¹⁰⁾				35,8	
Max. operation pressure in front of intercooler	psi			87	
Plate heat exchanger					
Coolant temperature (in/out)	°F	/			
Heating water temperature (in/out)	°F	/			
Heating water volumetric flow ⁹⁾	gal/min		@		psi delta p
CVs value ¹⁰⁾					
Max. operation pressure (heating water)	psi				
Space ventilation					
Genset ventilation heat ¹¹⁾	kBTU/hr	527			
Combustion air temperature: (min./design/max.)	°F			68 / 77 / 86	
Min. engine room temperature ¹²⁾	°F			59	
Max. temperature difference ventilation air (in/out)	°F			36	
Min. ventilation air flow in (combustion+ventilation) ¹³⁾	ft ³ /min			17500	
Gearbox					
Gear ratio				1,2	
Thermal output gearbox (watercooled)	kBTU/hr				
Efficiency		99,42	99,33	99,15	
Filling quantities					
Lube oil for engine	gal			92,46	
Coolant for engine	gal			81,89	
Coolant for intercooler	gal			6,08	
Heating water for plate heat exchanger	gal				
Engine sound level ¹⁴⁾ (1 meter distance, free field)					
Frequency	Hz	63	125	250	500
Sound pressure level	dB	82,9	95,9	91,1	97,5
Frequency	Hz	1000	2000	4000	8000
Sound pressure level	dB	93,4	90,0	86,6	100,5
Sum of pressure levels	Lin dB	104,1			
	dB A	102,4			
Sound power level	dB A	122,6			
Undampened exhaust noise (1 meter distance to outlet within 90°, free field)					
Frequency	Hz	63	125	250	500
Sound pressure level	dB	109,0	110,2	104,2	98,1
Frequency	Hz	1000	2000	4000	8000
Sound pressure level	dB	92,5	89,1	84,6	72,3
Sum of pressure levels	Lin dB	113,5			
	dB A	101,1			
Sound power level	dB A	113,1			
Dimensions (Aggregate)					
Length	in			283	
Width	in			75	
Height	in			104	
Gross weight (dry weight)	lb			49604 (48039)	
Power derating					
Altitude					
Combustion air temperature					
Intercooler 2nd stage temperature (in)					
Methane number					
Boundary conditions and consumables					
<p>1) Normal ft3 at p = 14.696 psi und T = 32 °F</p> <p>2) Generator gross power at nominal voltage, power factor = 1 and nominal frequency</p> <p>3) At standard reference conditions (ISO 3046-1); atmospheric pressure: 14.5 psi; air temperature: 77 °F; rel. air humidity 30 %</p> <p>4) Thermal output at layout temperature; tolerance +/- 8 %</p> <p>5) According to ISO 3046 (+ 5 % tolerance), using reference fuel used at nominal voltage, power factor = 1 and nominal frequency</p> <p>6) Deviations from the layout parameters respectively the reference fuel can have influence to the obtained efficiency and exhaust emissions</p> <p>7) Emission values during system parallel operation - where required with Oxcat</p> <p>8) Reference value at nominal load (without amount of oil exchange)</p> <p>9) Stated values for pure water, adaption for other cooling fluid composition necessary</p> <p>10) The CVs value declares the volumetric flow in gal/min at a pressure drop of 1 psi</p> <p>11) Only generator- and surface losses</p> <p>12) Frost-free conditions must be guaranteed</p> <p>13) Amount of ventilation air must be adapted to the gas safety concept</p> <p>14) All sound pressure levels at nominal load COP</p> <p>15) Power consumption of all electrical consumer, which are mounted at the module / aggregate</p> <p>16) Max. allowable cos phi at nominal power (view of producer)</p>					