

Technical data

Design conditions		Fuel gas data			
Inlet air temperature / rel. humidity	[°C] / [%]	25 / 60	Methane number	[-]	84
Altitude	[m]	100	Lower calorific value	[kWh/Nm³]	10.02
Exhaust temp. after heat exchanger	[°C]	120	Gas density	[kg/Nm³]	0.79
NOx emission	[mg/Nm³ @5%O₂]	≤500	Fuel gas basis		Natural gas

Genset:

Genset model	[-]	2000A
Engine	[-]	2020V20
Engine power	[kW]	2060
Rated speed	[1/min]	1500
Configuration / number of cylinders	[-]	V90° / 20
Bore / stroke / displacement	[mm]/[mm]/[dm³]	170 / 195 / 88.5
Compression ratio	[-]	13
Mean effective pressure	[MPa]	1.86
Mean piston speed	[m/s]	9.75
Mean lube oil consumption at full load	[g/kWh]	≤0.3
Engine control system	[-]	PAC control system
Generator efficiency	[%]	97.1
Voltage / voltage range / cos Phi	[V]/[%]/[-]	10500 / ±5 / 1.0
Frequency	[Hz]	50

Energy balance

Load	[%]	100	75	50
Electrical power	[kW]	2000	1500	1000
Net electrical power output (COP)	[kW]	1900		
High-temperature coolant heat	[kW ±8%]	1098	871	612
Low-temperature coolant heat	[kW ±8%]	199	155	100
Exhaust heat, cooled to 120°C	[kW ±8%]	1008	806	571
Exhaust temperature	[°C]	422	431	439
Wet exhaust mass flow	[kg/h]	10979	8518	5881
Combustion air mass flow	[kg/h]	10609	8231	5683
Radiation heat engine / generator	[kW ±8%]	79 / 60	74 / 42	67 / 31
Fuel consumption	[kW ±5%]	4524	3695	2551
Electrical / thermal efficiency	[%]	42 / 44.2	40.6 / 45.4	39.2 / 46.4
Total efficiency	[%]	86.2	86.0	85.6

System parameters

Ventilation air flow (combustion air incl.), ΔT=15 K	[kg/h]	51328
Intake air temperature after intercooling	[°C]	50
Combustion air temperature minimum / design	[°C]	5 / 25
Maximum exhaust back pressure	[kPa]	5
Maximum pressure loss in front of air cleaner	[kPa]	0.5
Gas supply pressure range	[kPa]	18 - 35
Starting method & power supply	[-]	Electrical start & DC24V
Lube oil content	[dm³]	300
Dry weight engine / genset	[kg]	7800 / 17000
Unit dimensions L x W x H	[mm]	7500 x 1700 x 2700

Cooling system

Coolant volume engine jacket / intercooler	[dm³]	210 / 52
Kvs value engine jacket / intercooler	[m³/h]	50 / 90
Jacket water coolant temperature in / out	[°C]	76.5 / 88.5
Intercooler coolant temperature in / out	[°C]	46 / 49
Engine jacket water flow rate min. / max.	[m³/h]	90 / 100
Water flow engine jacket / intercooler	[m³/h]	95 / 60
Pressure loss engine / intercooler	[bar]	3.61 / 0.44

Noise

Octave band	[Hz]	32	63	125	250	500	1000	2000	4000	8000
Exhaust noise	[dB(A)]	118	127	139	120	110	104	97	100	94
Unit noise	[dB(A)]	97	99	109	105	104	104	100	106	106

Notes: Engine power rating per ISO 3046/1. Exhaust emissions refer to dry exhaust gas at 5% O₂. Kvs is the flow rate at 1 bar pressure loss. Exhaust noise measured at 1 m: ±2.5 dB(A); unit noise at 1 m lateral distance: ±1 dB(A).
The data is for reference only. Actual values shall be calculated based on the project gas composition. Subject to technical changes.