Biolectric NV
Jan De Malschelaan 4B
B-9140 Temse
+32(0)3 68 92 92 8
info@biolectric.be
www.biolectric.be

Specification Sheet
Types: 10, 11, 20-2, 22-1, 22-2, 33, 40, 44, 52 kW

Type	10	11	20-2		22-1	22-2		33	40			44		52	
Engine															
Fuel	Biogas[1]														Biogas[2]
Number of engines	1	1	2		1	2		2	2			2		2	
Engine type	DF972				WG1605	DF972			WG1605						WG1606
Number of cylinders	3				4	3			4						
Displacement (l)	0.962				1.537	0.962			1.537						
Rotation Speed (rpm)	2400					2400									
Cycle	Otto														
Electric Power (kW)	**9.7**	**11**	**9.7**	**9.7**	**22**	**11**	**11**	**11**	**22**	**20**	**20**	**22**	**22**	**22**	**30**
Electric Power (kVA)	**10**	11.3	**10**	**10**	22.6	11.3	11.3	11.3	22.6	20.6	20.6	22.6	22.6	22.6	30.8
Consumption (kW)	46.1	39.3	46.1	46.1	68.8	39.3	39.3	39.3	68.8	62.5	62.5	68.8	68.8	68.8	93,8
Electric Efficiency (%)	21	28	21		32	28			32						
Total Efficiency (%)	94				97	94			97						
Heat power (kW)	**33.6**	**25.9**	**33.6**	**33.6**	**45.0**	**25.9**	**25.9**	**25.9**	**45.0**	**40.9**	**40.9**	**45.0**	**45.0**	**45.0**	**61.3**
Max Flue gas temperature (°C)	90				110	90			110						
Max Coolant temperature (°C)	85														
Voltage (V)	400														
Current (A)	14	16	14	14	32	16	16	16	32	29	29	32	32	32	44
Cos phi	0.97														
Generator															
Type	4P/IE2 Asynchronous Generator														
Rotation Speed	1500 rpm														
Frequency	50Hz														
Voltage	3 x 400V														
Mode	Triangle														

Mechanical construction

Engine and generator on rigid chassis, with belt drive. The set is placed on vibration dampers inside a sea container of 20ft.

Fuel

Biogas[1] (= 60% CH4 + 40% CO2) thourgh airlock, solenoid valve and carbon filter.
Biogas [2] Purified biogas (34 MJ/m3)

Exhaust

Exhaust system with water cooled exhaust collector, double silencer and flue gas heat exchanger.

Cooling system

Cooling system under pressure with electric circulation pump. Heat is generated at the engine, the water cooled exhaust collector and the flue gas heat exchanger. Heat delivery to reactor by wall heating

Engine start

12V battery with electric charger

Electric cabinet

PCB control board with microcontroller
Interface:
Buttons
Engine start/stop, Pump Manual/Auto
LCD screen
Date/Time, Reactor Temperature, Water Temperature,
Web interface
Electri
Temperature measurements
Reactor, Water, Container, Exhause, Engine
Pressure Measurements
Reactor, Engine oil
Flow Measurements
Biogas, Manure
Relay
Pump, Mixer, Valves, Engine start, Generator start, Solenoid Biogas Valve

The values in this sheet have been obtained according to ISO 3046.1.2002. Test conditions 20°C, sea level, relative humidity 50%. Biolectric NV reserves the right to change the technical specifications without prior notice.