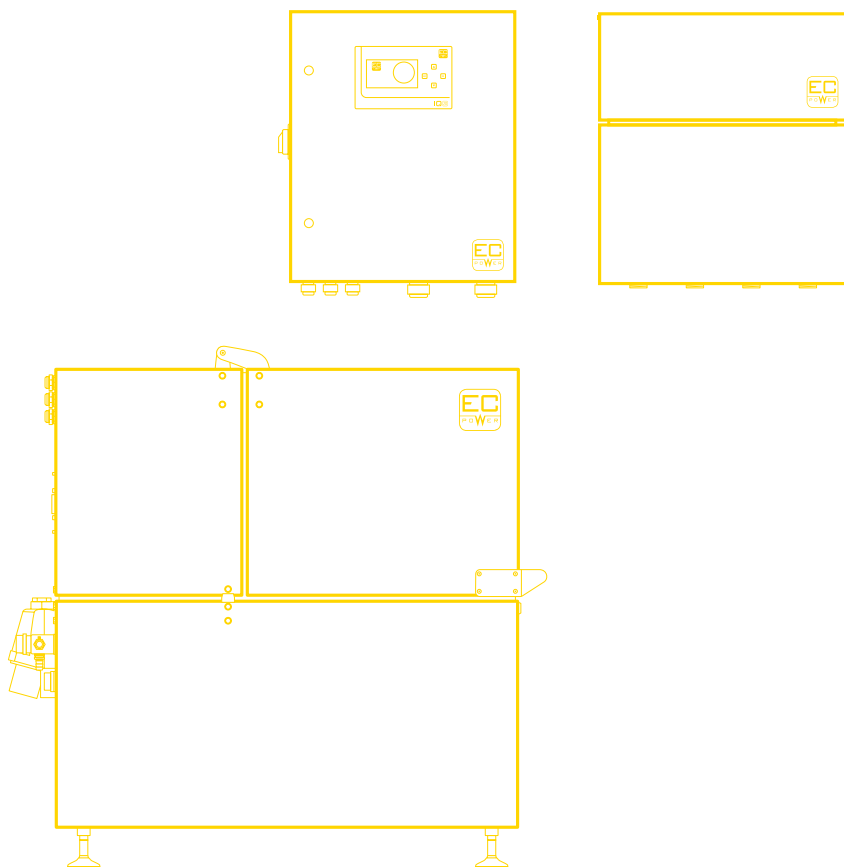
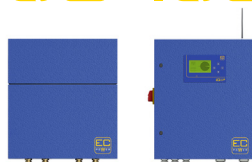




XRGI[®] 20

B I O G E N I C
T E C H N I C A L D A T A

Q80 iQ20^S



The XRGi® is a combined heat and power plant (CHP) that works on the principle of co-generation.

An XRGi® system consists of three main components: Power Unit, Q-Heat Distributor and iQ-Control Panel.

In addition, you can extend your XRGi® system with a Storage Tank with a capacity of 500, 800 or 1,000 litres for optimum operation.

ORDERING DATA

Supplier's name or trademark	EC POWER
Supplier's model identifier	XRGi® 20 BIOGENIC
Article number	X200006
Modules	XRGi® 20 BIOGENIC Power Unit, iQ20S-Control Panel, Q80-Heat Distributor

FUELS

Biogas ¹ , LPG, natural gas
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REQUIRED SPECIFICATIONS OF BIOGAS AS A FUEL²

Parameters	Symbol	Unit	Limit value
Methane ³	CH ₄	Vol.-%	> 55
Methane number			80-145
Calorific value ⁴	Hn	kWh/Nm ³	> 6
Total sulphur content ⁵	S	mg/Nm ³	< 5
Siloxane ⁶	Si	mg/Nm ³ CH ₄	< 2
Chlorine ⁷	Cl	mg/Nm ³ CH ₄	< 80
Fluorine ⁸	F	mg/Nm ³ CH ₄	< 40
Ammonia	NH ₃	mg/Nm ³	< 3
Oxygen	O ₂	Vol.-%	0,5-1,5
Relative humidity ⁹	φ	%	< 70
Temperature	Tg	°C	10 < Tg < 30
Gas pressure	Pg	mbar	20 < Pg < 45

OUTPUT

Power Modulation	50 %	75 %	100 %
Electrical output, modulating	10	15	20
Thermal output, modulating	26,1	31,4	38,7
Power consumption gas, in accordance with LCV	37,1	48,1	61,1
Electrical own demand, production	0,078		
Electrical own demand, stand-by	0,025		

EFFICIENCIES & OPERATING PARAMETERS

Power Modulation	50 %	75 %	100 %
Electrical efficiency in accordance with LCV	26,9	31,1	32,7
Thermal efficiency in accordance with LCV	70,4	65,4	63,4
Total efficiency in accordance with LCV	97,3	96,5	96,1

¹ The composition of the biogenic gas may affect the values in this data sheet

² The values specified apply for the cleaned gas before it enters the XRGi® 20 BIOGENIC system. Where the vol.-% of methane is lower, admixture of other methane-containing gases such as natural gas or (biogenic) LPG is required. The combustion air/gas must not contain any phosphorus or arsenic, nor any heavy metals, halogen or other corrosive elements. Additional components such as activated carbon filter, carbon filter material, gas detector, shut-off valve for gas detector, methane sensor, hydrogen sulphide sensor, sound/light alarm, flame arrester and exhaust gas system may be required for the safe operation of the XRGi® 20 BIOGENIC system.

³ In the event of a different concentration, please refer to EC POWER.

⁴ The achievable power output depends on the quality and composition of the gas.

⁵ In principle, the H₂S filtering should be 100 % effective. However, under exceptional circumstances, the system can be operated for a short time with a concentration of < 5 mg/Nm³.

⁶ The impregnation of the filter material must be dimensioned based on the siloxane pollution.

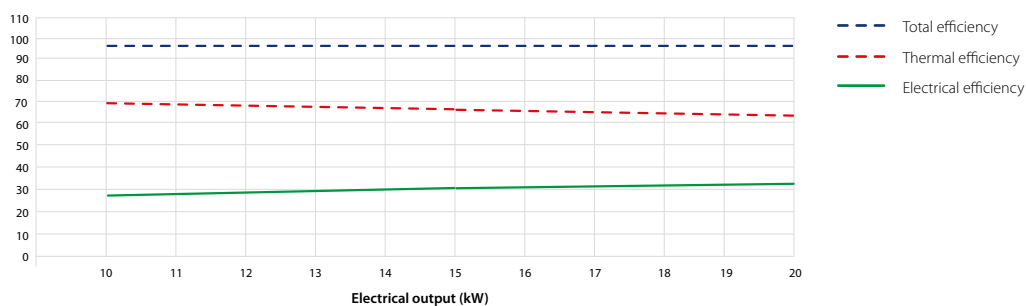
⁷ In the event of a different concentration, please refer to EC POWER.

⁸ In the event of a different concentration, please refer to EC POWER.

⁹ There must be no condensation in the gas circuit.

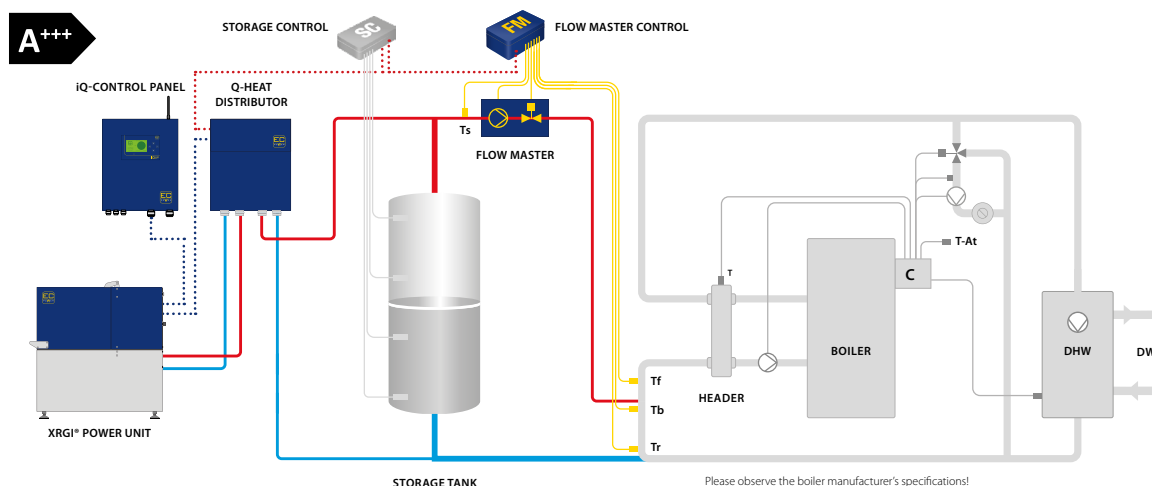
POWER MODULATION

CONTINUOUS MODULATION OF 10 KW-20 KW IN POWER-LED MODE



HYDRONIC INTEGRATION

PRINCIPLE CIRCUIT DIAGRAM: SERIES CIRCUIT WITH INJECTION – BOILER WITH HEADER



More principle circuit diagrams and information can be found in the EC POWER „Hydronic Solutions“.

NOTE: If products from other companies are used in the system in addition to EC POWER products, EC POWER assumes no liability for the accuracy of the energy efficiency class calculation for the entire system.

TEMPERATURE

Flow temperature, constant	°C	~ 85
Max return temperature, variable	°C	5-75
Return temperature, recommended	°C	< 65

EXHAUST GAS

Power modulation			Value
Max. exhaust gas temperature	°C		120
Emissions	NO _x	mg/Nm ³	< 60
	CO	mg/Nm ³	< 50

SOUND

Sound pressure level at a distance of up to 1 m (based on surroundings)	dB(A)	49
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POWER CONNECTION

Voltage, 3 phases + N + earth	V	400
Frequency	Hz	50

SERVICE

Service interval (operating hours)	4.000
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DIMENSIONS AND WEIGHT

		XRGi® 20 BIOGENIC Power Unit	Q80-Heat Distributor	iQ20S-Control Panel
Dimensions, W x H x D	mm	750 x 1.170 x 1.120	550 x 600 x 295	500 x 600 x 225
Footprint	m ²	0,84	wall mounted	wall mounted
Weight	kg	680	44	30

Deviations in values depend on the ambient and operating conditions, tolerance +/- 5 %.

Subject to technical modifications deviations from design and errors.



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