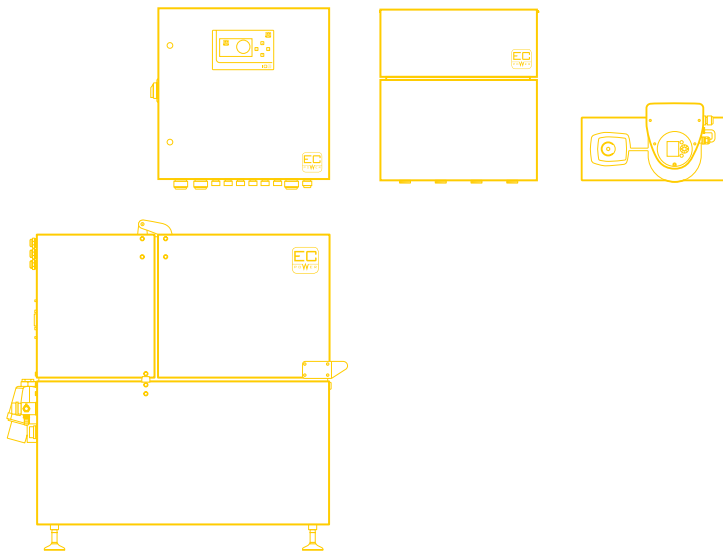
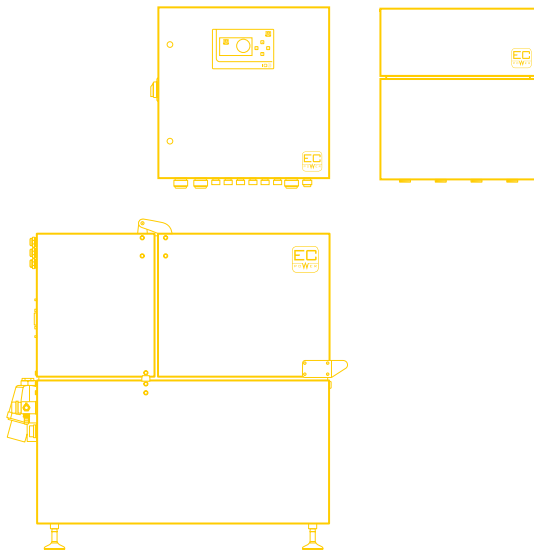


A+++



A++



XRGI[®] 20

TECHNICAL DATA

TECHNICAL DATA FOR THE XRGI® 20

Product data sheet in accordance with Regulation (EU) No. 811/2013; 813/2013, Dated 26.09.2018



A++

The XRGI® is a combined heat and power plant (CHP) that works on the principle of cogeneration.

An XRGI® system consists of three main components – the Power Unit, Q-Heat Distributor and the iQ-Control Panel. In a package with a Flow Master (temperature control, class II = 2 %) the XRGI® is rated as seasonal space heating energy efficiency class A+++.

In addition, you can also 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 without condensing technology¹	XRGI® 20 with condensing technology¹
Article number	X200001	X200001+01KIT2616
Modules	Power Unit, iQ20-Control Panel, Q80-Heat Distributor	Power Unit, iQ20-Control Panel, Q80-Heat Distributor + Condensing and exhaust gas heat exchanger kit

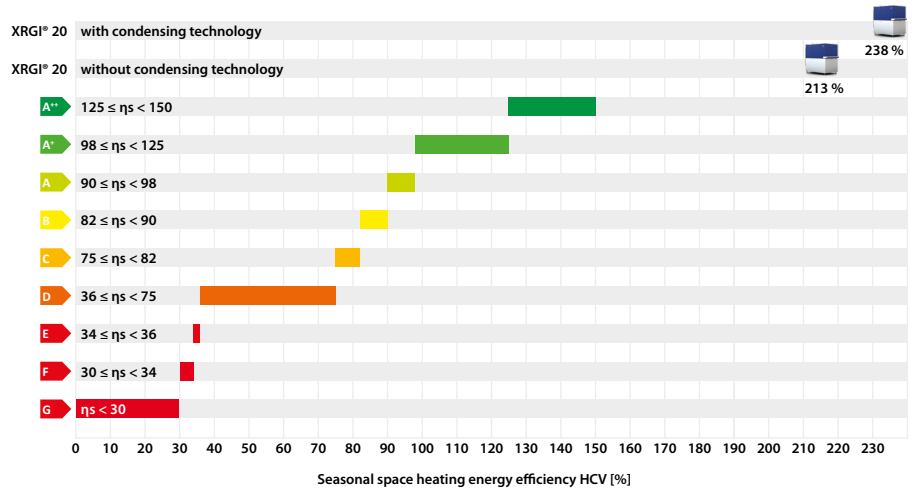
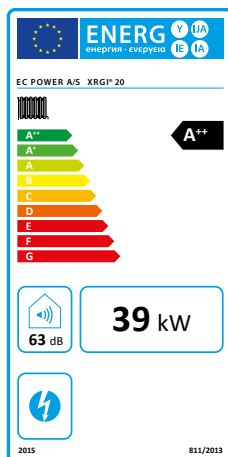
ErP-LABEL DATA²

Seasonal space heating energy efficiency class	A++	A++
Rated heat output P_{rated}	39 kW	42 kW
Seasonal space heating energy efficiency; HCV ³ η_s	213 % ¹	238 %
Sound power level, indoors L_{WA}	63 dB	63 dB
Electrical efficiency; in accordance with heating value LCV ³ $\eta_{el\ CHP100+SUP\ 0}$	33 %	33 %
All special precautions to be taken during assembly, installation or service	Refer to Commissioning and Service Manual	Refer to Commissioning and Service Manual

¹ Return temperatures as per EN 50465 2015 7.6.1: Without condensing technology 47 °C, with condensing technology 30 °C.

² The values were rounded in accordance with the requirements governing product data sheets by Regulation (EU) No. 811/2013; 813/2013.

³ HCV = higher calorific value, LCV = lower calorific value



OUTPUT

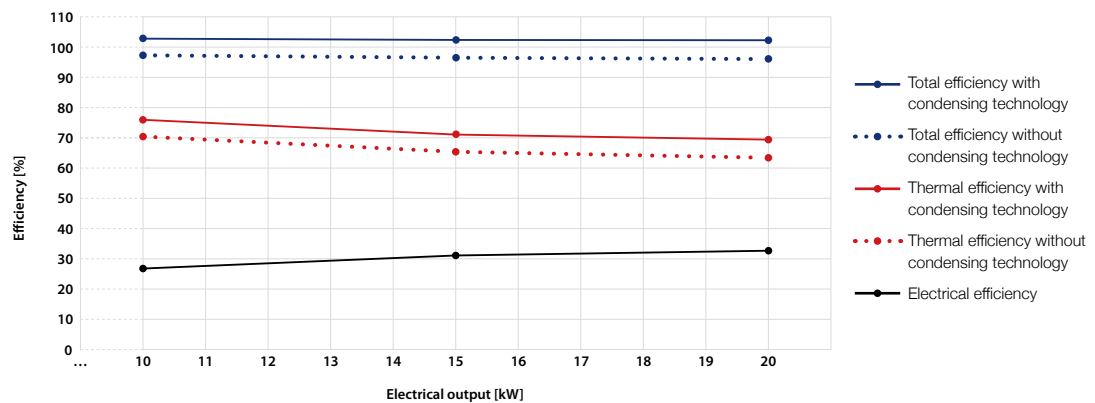
XRGI® system		XRGI® 20 without condensing technology ¹			XRGI® 20 with condensing technology ¹		
Power modulation*		50 %	75 %	100 %	50 %	75 %	100 %
Electrical output, modulating*	kW	10.0	15.0	20.0	10.0	15.0	20.0
Thermal output, modulating*	kW	26.1	31.4	38.7	28.1	34.2	42.2
Power consumption, gas in accordance with LCV ²	kW	37.1	48.1	61.1	37.0	48.0	60.8
Electrical own demand, production	kW	0.078	0.078	0.078	0.083	0.082	0.081
Electrical own demand, stand-by	kW	0.025			0.025		

EFFICIENCIES & OPERATING PARAMETERS

Power modulation*		50 %	75 %	100 %	50 %	75 %	100 %
Electrical efficiency in accordance with LCV ²	%	26.9	31.1	32.7	26.9	31.2	32.9
Thermal efficiency in accordance with LCV ²	%	70.4	65.4	63.4	76.0	71.2	69.4
Total efficiency in accordance with LCV ²	%	97.3	96.5	96.1	102.9	102.4	102.3
Seasonal space heating energy efficiency in operating mode ^{3,4}	η_{son} %	217			242		

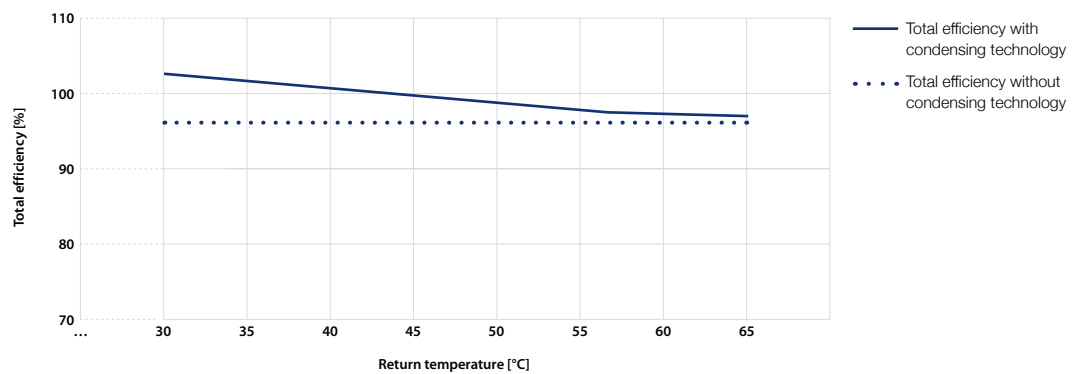
POWER MODULATION

Continuous modulation of 10 – 20 kW in power-controlled mode



TOTAL EFFICIENCY AT FULL LOAD

XRGI® 20 total efficiency / return temperature



* Continuous modulation in power-controlled mode

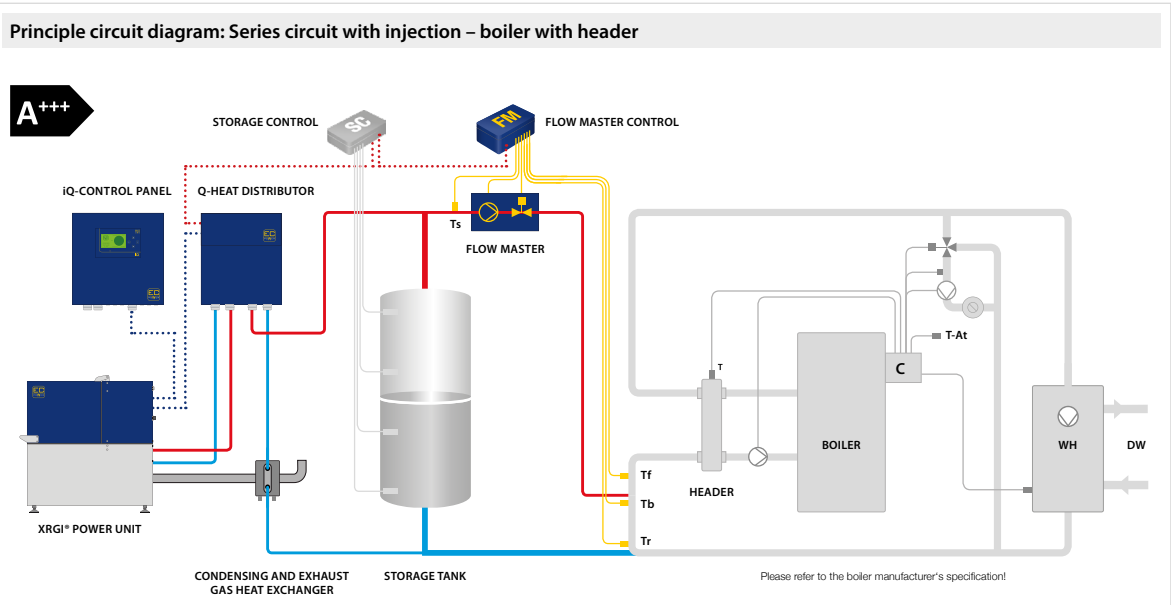
¹ Return temperatures as per EN 50465 2015 7.6.1: Without condensing technology 47 °C, with condensing technology 30 °C.

² LCV = lower calorific value

³ This values are based on independent, certified and authorised inspection bodies. Test reports are available upon request.

⁴ Efficiency at rated heat output as per the delegated Commission Regulation (EU) No. 811/2013; 813/2013

HYDRAULIC INTEGRATION



More principle circuit diagrams and information can be found in the EC POWER „Hydraulic 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.

XRGi ¹ system		XRGi ¹ 20 without condensing technology ¹	XRGi ¹ 20 with condensing technology ¹
Flow temperature, constant	°C	~ 85	~ 85
Return temperature, variable	°C	5-75	5-75

FUELS	Natural gas (all qualities), propane, butane	yes	yes
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EXHAUST GAS		50 %	75 %	100 %	50 %	75 %	100 %
Power modulation							
Max. exhaust gas temperature	°C	-	-	120	-	-	90
Condensate	kg/h	-	-	-	3.1	3.5	3.7
Emissions (Test data at max. output)	CO < 50	mg/Nm ³		15	26		
	NOx, pond, HCV ^{2,3} < 240	mg/kWh		19	10		

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)	Hours	6,000
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DIMENSIONS AND WEIGHT		XRGi ¹ 20 Power Unit	Q80-Heat Distributor	iQ20-Control Panel
Dimensions, W x H x D	mm	750 x 1,170 x 1,120	550 x 600 x 295	600 x 600 x 210
Footprint	m ²	0.84	wall mounted	wall mounted
Weight	kg	750	44	40

¹ Continuous modulation in power-controlled mode
² Return temperatures as per EN 50465 2015 7.6.1: Without condensing technology 47 °C, with condensing technology 30 °C.
³ as per the delegated Commission Regulation (EU) No. 811/2013; 813/2013
³ HCV = higher calorific value
 Deviations in values depend on the ambient and operating conditions, tolerance +/- 5 %.
 Subject to technical modifications, deviations from design and errors.

TECHNICAL DATA FOR THE XRGI® 20 WITH FLOW MASTER

(Temperature control, Class II = 2 %)

Product data sheet in accordance with Regulation (EU) No. 811/2013; 813/2013, Dated 26.09.2018



Figure shows FM type 350



A+++

The Flow Master including Flow Master Control regulates the supply of heat from the XRGI® and from the storage tank to the consumer network. This technology enables a significantly higher heat output to be temporarily made available to the consumer side. This allows peaks of heat demand to be handled by the XRGI®, thereby extending its service life and increasing electricity production.

The 4 models can deliver a heat output of 50, 150, 250 or 350 at a ΔT of 20 K.

ORDERING DATA

Supplier's name or trademark	EC POWER			
Supplier's model identifier	XRGI® 20 without condensing technology¹		XRGI® 20 with condensing technology¹	
Article number	X200001		X200001+01KIT2616	
Modules	Power Unit, IQ20-Control Panel, Q80-Heat Distributor		Power Unit, IQ20-Control Panel, Q80-Heat Distributor + Condensing and exhaust gas heat exchanger kit	
Supplier's model identifier	Flow Master including Flow Master Control			
FM-type (Temperature control, Class II = 2 %)	FM 50	FM 150	FM 250	FM 350
Article number	17D1130	17D1131	17D1132	17D1133

ErP-LABEL DATA²

Seasonal space heating energy efficiency class of package	A+++	A+++
Seasonal space heating energy efficiency of package	215 %	240 %

¹ Return temperatures as per EN 50465 2015 7.6.1: Without condensing technology 47 °C, with condensing technology 30 °C.
² The values were rounded in accordance with the requirements governing product data sheets by Regulation (EU) No. 811/2013.

Seasonal space heating energy efficiency of the space heater with cogeneration **213 %**

Temperature control Class I = 1 %, Class II = 2 %, Class III = 1,5 %, Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3,5 %, Class VIII = 5 %, **+ 2 %**

Supplementary boiler Seasonal space heating energy efficiency in %
 From fiche of boiler ('I' - 'II') = **- 3 %**

Solar contribution (From fiche of solar device)

Collector size (in m²) Tank volume (in m³) Collector efficiency (in %) Tank rating A* = 0,95, A = 0,91, B = 0,86, C = 0,83, D-G = 0,81

('III' x [] + 'IV' x []) x 0,7 x ([] / 100) x [] = **+ 4 %**

Seasonal space heating energy efficiency of package **215 %**

Seasonal space heating energy efficiency class of package

G < 30 % **F** ≥ 30 % **E** ≥ 34 % **D** ≥ 36 % **C** ≥ 75 % **B** ≥ 82 % **A** ≥ 90 % **A*** ≥ 98 % **A**** ≥ 125 % **A+++** ≥ 150 %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.



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XRGI[®] 20

TECHNICAL DATA