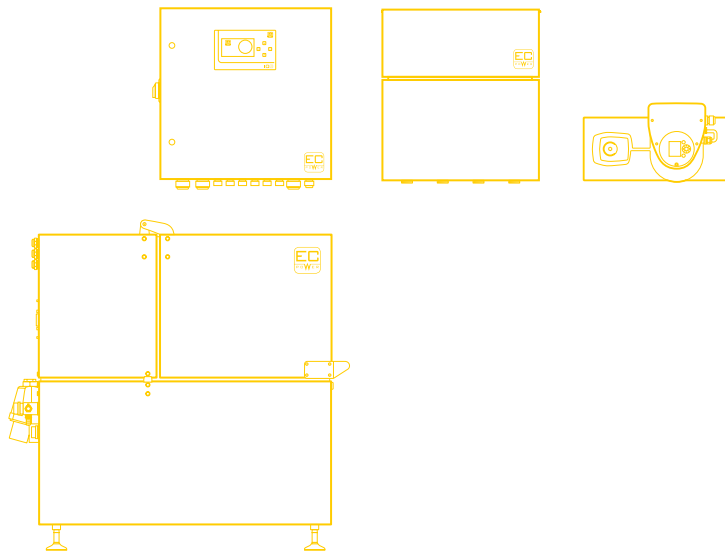
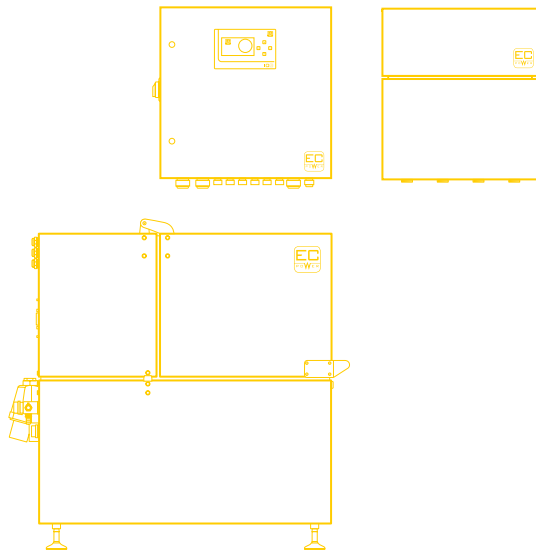


A+++



A++



# XRGI<sup>®</sup> 20

TECHNICAL DATA

# TECHNICAL DATA FOR THE XRGI® 20

Product data sheet in accordance with Regulation (EU) No. 811/2013, Dated 26.09.2015



**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

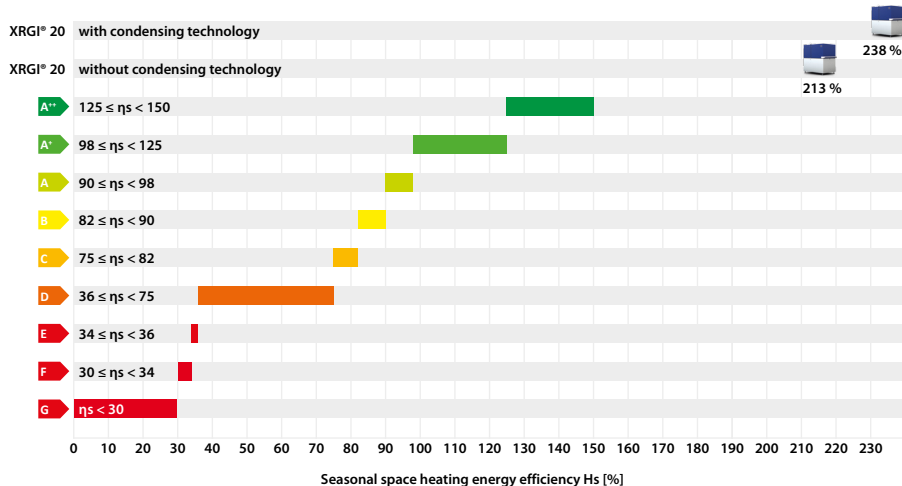
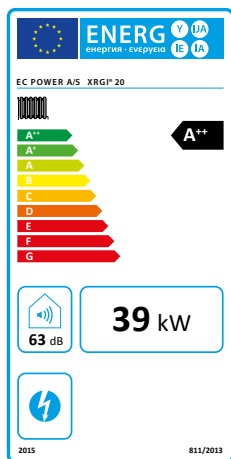
Supplier's name or trademark	EC POWER	
Supplier's model identifier	<b>XRGI® 20 without condensing technology<sup>1</sup></b>	<b>XRGI® 20 with condensing technology<sup>1</sup></b>
Article number	X200001	X200001+01KIT2616
Modules	Power Unit, iQ20-Control Panel, Q80-Heat Distributor	Power Unit, iQ20-Control Panel, Q80-Heat Distributor + Condensing and exhaust gas heat exchanger kit

## ErP-LABEL DATA<sup>2</sup>

Seasonal space heating energy efficiency class	<b>A++</b>	<b>A++</b>
Rated heat output $P_{rated}$	39 kW	42 kW
Seasonal space heating energy efficiency; $H_s$	<b>213 %</b>	<b>238 %</b>
Sound power level, indoors $L_{WA}$	63 dB	63 dB
Electrical efficiency; in accordance with heating value $H_i$ $\eta_{el\ CHP100+SUP\ 0}$	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

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

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



## OUTPUT

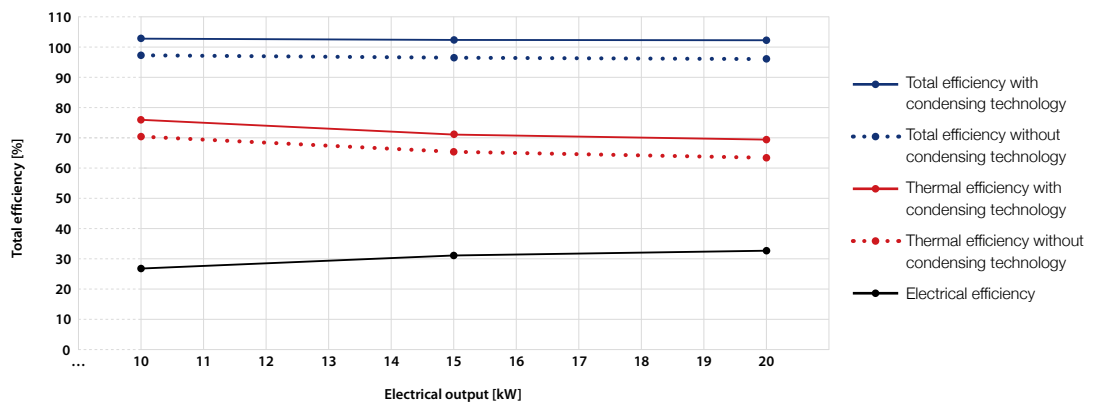
XRGI® system		XRGI® 20 without condensing technology <sup>1</sup>			XRGI® 20 with condensing technology <sup>1</sup>		
Power modulation*		50 %	75 %	100 %	50 %	75 %	100 %
Electrical output, modulating*	kW	10.0	15.0	20.0	10.0	15.0	20.0
Thermal output, modulating*	kW	26.1	31.4	38.7	28.1	34.2	42.2
Power consumption, gas in accordance with Hi	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 Hi	%	26.9	31.1	32.7	26.9	31.2	32.9
Thermal efficiency in accordance with Hi	%	70.4	65.4	63.4	76.0	71.2	69.4
Total efficiency in accordance with Hi	%	97.3	96.5	96.1	102.9	102.4	102.3
Seasonal space heating energy efficiency in operating mode <sup>2,3</sup>	$\eta_{son}$ %	217			242		

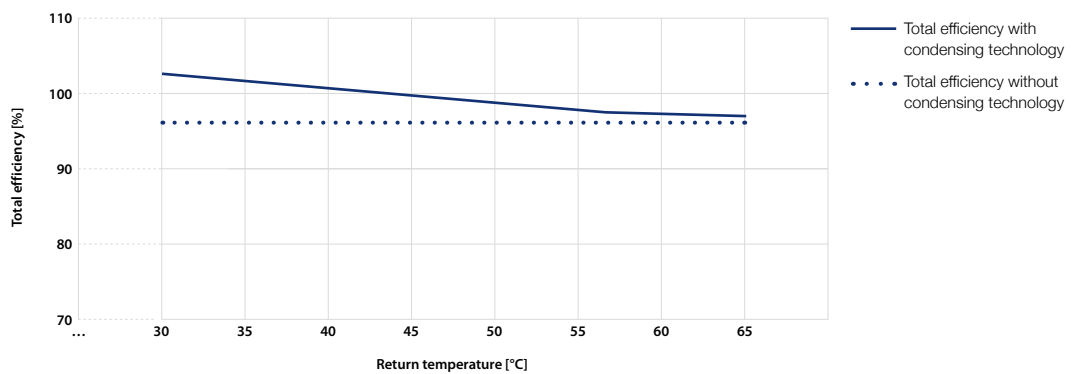
## POWER MODULATION

### 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

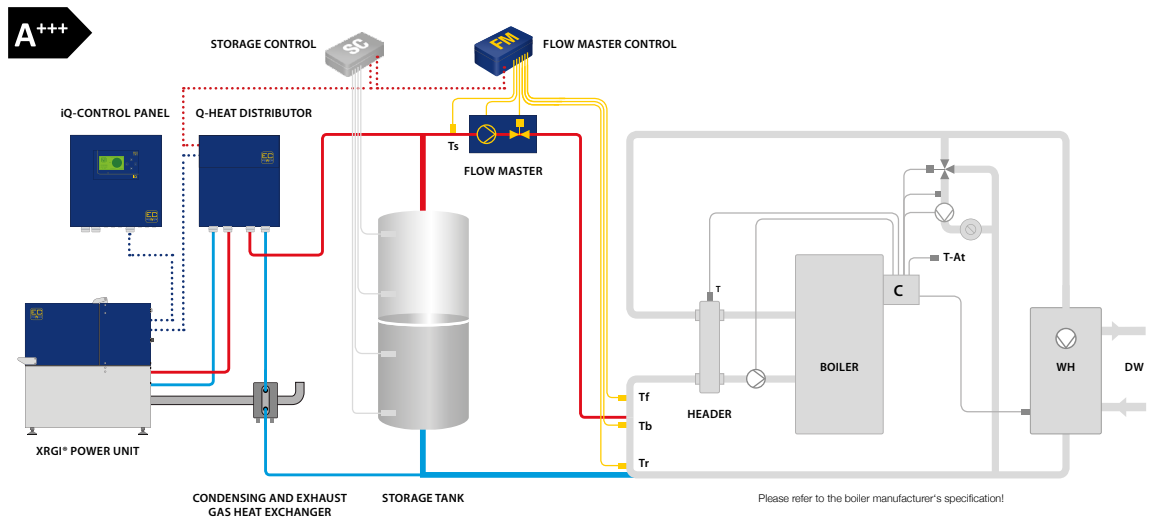
<sup>1</sup> Return temperatures as per EN 50465 2015 7.6.1: Without condensing technology 47 °C, with condensing technology 30 °C.

<sup>2</sup> Based on the values measured by the Danish Gas technology Center and accredited independent third-party organisations.

<sup>3</sup> Efficiency at rated heat output as per the delegated Commission Regulation (EU) No. 811/2013

**HYDRAULIC INTEGRATION**

**Principle circuit diagram: Series circuit with injection – boiler with header**



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

<b>FUELS</b>	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)	CO < 50	mg/Nm <sup>3</sup>	-	-	15	-	-
	NO <sub>x</sub> < 100	mg/Nm <sup>3</sup>	-	-	18	-	-

<b>SOUND</b>	Sound pressure level at a distance of up to 1 m (based on surroundings)	dB(A)	49
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<b>POWER CONNECTION</b>	Voltage, 3 phases + N + Earth	V	400
	Frequency	Hz	50

<b>SERVICE</b>	Service interval (operating hours)	Hours	6,000
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DIMENSIONS AND WEIGHT		XRGi <sup>®</sup> 20 Power Unit	Q80-Heat Distributor	iQ20-Control Panel
Dimensions, W x H x D	mm	750 x 1,170 x 1,250	550 x 600 x 295	600 x 600 x 210
Footprint	m <sup>2</sup>	0.93	wall mounted	wall mounted
Weight	kg	750	44	40

All values are net and have been certified by an independent inspection body. Tolerance ±5 %. Specifications subject to change without notice.

# 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, Dated 26.09.2015



Q80 iQ20 FM

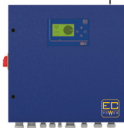


Figure shows FM type 350

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	<b>XRGI® 20 without condensing technology<sup>1</sup></b>		<b>XRGI® 20 with condensing technology<sup>1</sup></b>	
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	<b>Flow Master including Flow Master Control</b>			
FM-type (Temperature control, Class II = 2 %)	<b>FM 50</b>	<b>FM 150</b>	<b>FM 250</b>	<b>FM 350</b>
Article number	17D1130	17D1131	17D1132	17D1133

## ErP-LABEL DATA<sup>2</sup>

Seasonal space heating energy efficiency class of package	<b>A+++</b>	<b>A+++</b>
Seasonal space heating energy efficiency of package	<b>215 %</b>	<b>240 %</b>

<sup>1</sup> Return temperatures as per EN 50465 2015 7.6.1: Without condensing technology 47 °C, with condensing technology 30 °C.  
<sup>2</sup> 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  
 From fiche of 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 %**

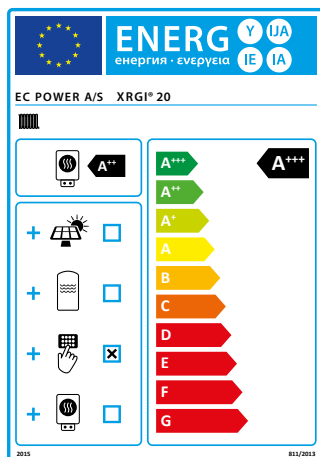
Supplementary boiler  
 From fiche of boiler  
 Seasonal space heating energy efficiency in %  
 ( 'I' - 'II' ) x 'III' = - %

Solar contribution (From fiche of solar device)  
 Collector size (in m<sup>2</sup>) Tank volume (in m<sup>3</sup>) 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 = + %

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<sup>®</sup> 20

TECHNICAL DATA