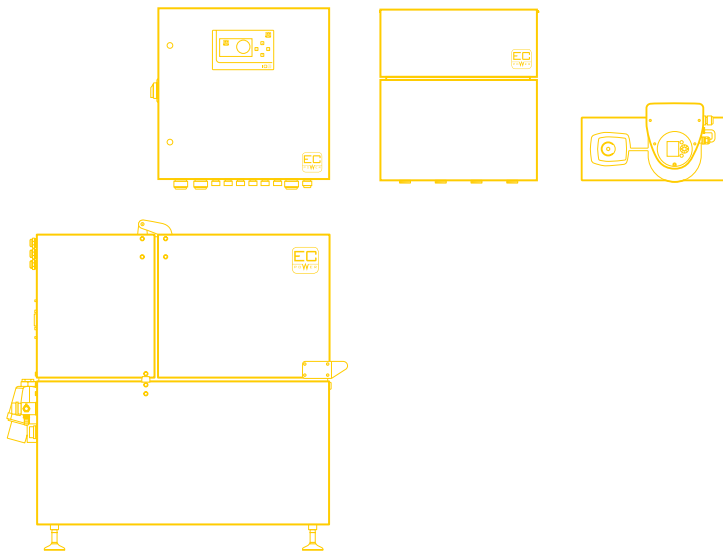
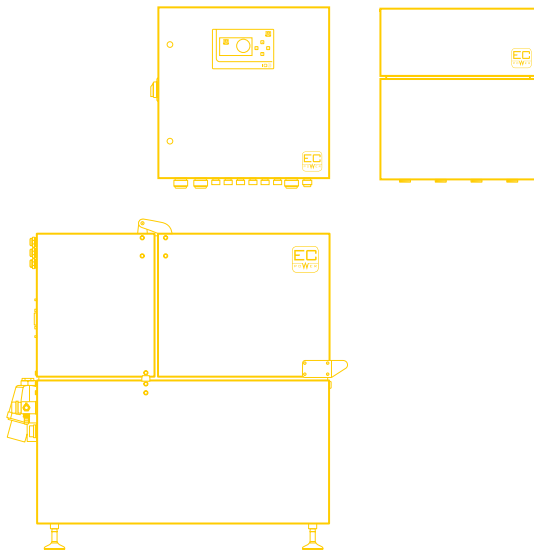


A+++



A++



XRGI[®] 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

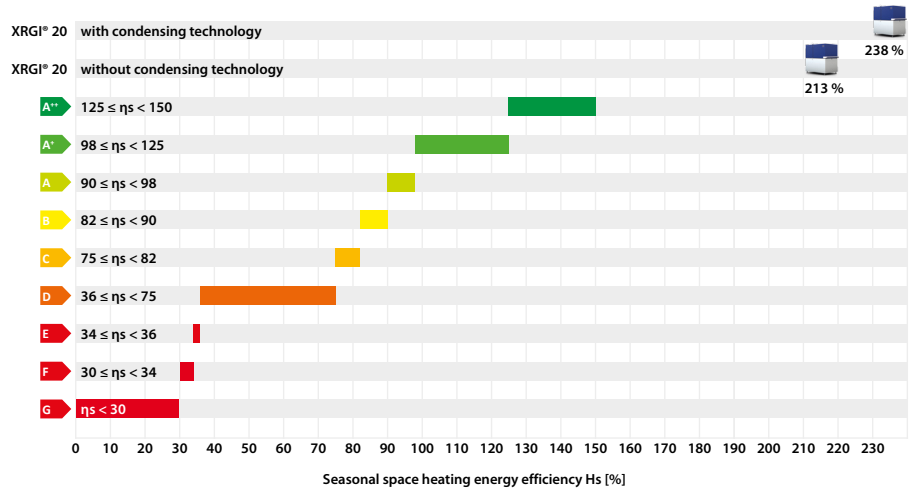
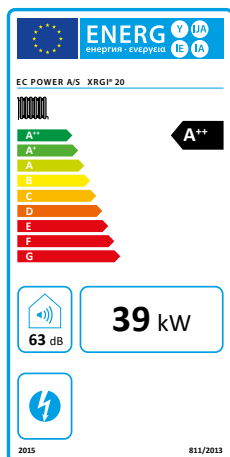
| | | |
|------------------------------|---|--|
| Supplier's name or trademark | EC POWER | |
| Supplier's model identifier | XRGI® 20 without condensing technology¹ | XRGI® 20 with condensing technology¹ |
| Article number | X200001 | X200001+01KIT2616 |
| Modules | Power Unit, iQ20-Control Panel, Q80-Heat 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; η_s | 213 % | 238 % |
| Sound power level, indoors L_{WA} | 63 dB | 63 dB |
| Electrical efficiency; in accordance with heating value H_i $\eta_{el} \text{ CHP100+SUP } 0$ | 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.



OUTPUT

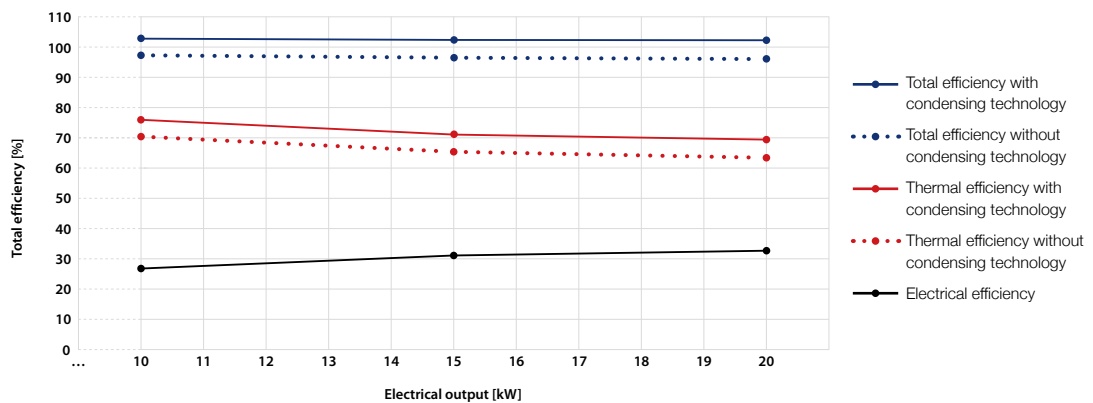
| XRGI® system | | XRGI® 20 without condensing technology ¹ | | | XRGI® 20 with condensing technology ¹ | | |
|--|----|---|-------|-------|--|-------|-------|
| Power modulation* | | 50 % | 75 % | 100 % | 50 % | 75 % | 100 % |
| Electrical output, modulating* | kW | 10.0 | 15.0 | 20.0 | 10.0 | 15.0 | 20.0 |
| Thermal output, modulating* | kW | 26.1 | 31.4 | 38.7 | 28.1 | 34.2 | 42.2 |
| Power consumption, gas in accordance with 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 ^{2,3} | η_{son} % | 217 | | | 242 | | |

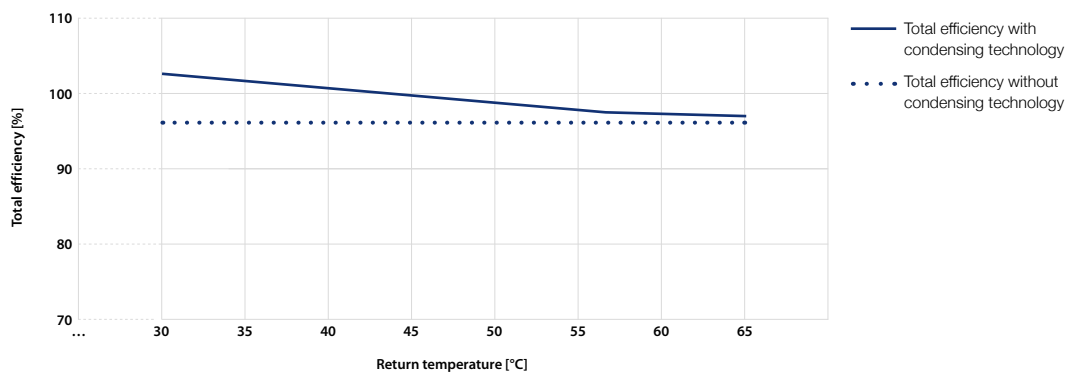
POWER MODULATION

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

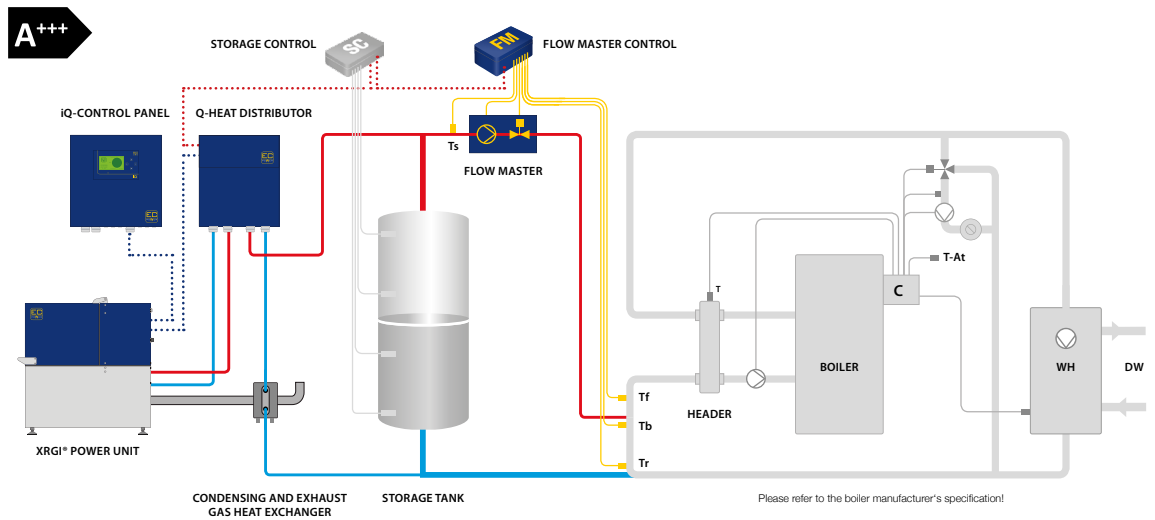
¹ Return temperatures as per EN 50465 2015 7.6.1: Without condensing technology 47 °C, with condensing technology 30 °C.

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

³ 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 [®] system | | XRGi [®] 20 without condensing technology ¹ | XRGi [®] 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 |
|--------------|--|-----|-----|

| 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 ³ | - | - | 15 | - | - | 26 |
| | NO _x < 100 | mg/Nm ³ | - | - | 18 | - | - | 10 |

| | | | |
|--------------|---|-------|----|
| SOUND | Sound pressure level at a distance of up to 1 m (based on surroundings) | dB(A) | 49 |
|--------------|---|-------|----|

| | | | |
|-------------------------|-------------------------------|----|-----|
| POWER CONNECTION | Voltage, 3 phases + N + Earth | V | 400 |
| | Frequency | Hz | 50 |

| | | | |
|----------------|------------------------------------|-------|-------|
| SERVICE | Service interval (operating hours) | Hours | 6,000 |
|----------------|------------------------------------|-------|-------|

| DIMENSIONS AND WEIGHT | | XRGi [®] 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 |

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 | 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
 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 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 = + %

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 %



WWW.ECPOWER.EU



XRGI[®] 20

TECHNICAL DATA