
XRGI®
ELECTRIFYING HEAT
EC
POWER


EC
POWER

Rising energy prices and resource scarcity require new approaches to generating usable energy. XRGI® is an environmentally friendly and economical solution based on cutting-edge technology.

XRGI® is a decentralised energy system that uses cogeneration – or combined heat and power (CHP) – to produce both electricity and heat. It utilises up to 96 % of the fuel that is fed into it, with the use of condensers even more. This reduces energy costs and also carbon emissions.

XRGI® has proven itself to be an energy efficient system since 1996.

The new minis: XRGI 6® and XRGI 9®

A newly developed, high-performance engine makes our new XRGI® units into real miracles in their power class. With an output of 2.5 – 6 kW_{el} and 8 – 13.5 kW_{th}, the XRGI 6® achieves an overall efficiency of 93 % (with optional condenser even higher). The XRGI 9® (4 – 9 kW_{el}/12 – 20 kW_{th}) produces similar efficiencies as the XRGI 6®.

The service interval for the minis is 10,000 operating hours. Both models are ideal for large single-family homes, apartment buildings, small hotels and office buildings.

The classic: XRGI 15®

With an output of 6 – 15 kW_{el} / 17 – 30 kW_{th} and an overall efficiency rate of 92 %, the XRGI 15® is perfect for large buildings, such as hotels, restaurants or nursing homes. Its cost effectiveness and quality has been testified by thousands of satisfied customers.

The XRGI 15® has received multiple awards in the competitive German market.

XRGI® – State-of-the-art technology

With the XRGI 15® and the XRGI 20®, EC POWER has taken cogeneration to the next level.

The introduction of the XRGI 6® and XRGI 9® completes the product range of EC POWER in the under 50 kW_{th} segment. These 2 smaller units provide an interesting option for larger single-family homes, low-rise apartments and small hotels.

Outstanding power: XRGI 20®

Using the same engine as the XRGI 15®, this unit produces 10 – 20 kW_{el} /25 – 40 kW_{th}, achieving an overall efficiency rate of 96 % (without condenser). This year, the unit was in receipt once again of „Blue Angel“ sustainability award.

The XRGI 20® is ideal for use in larger buildings such as hospital departments or municipal facilities.

Parallel operation

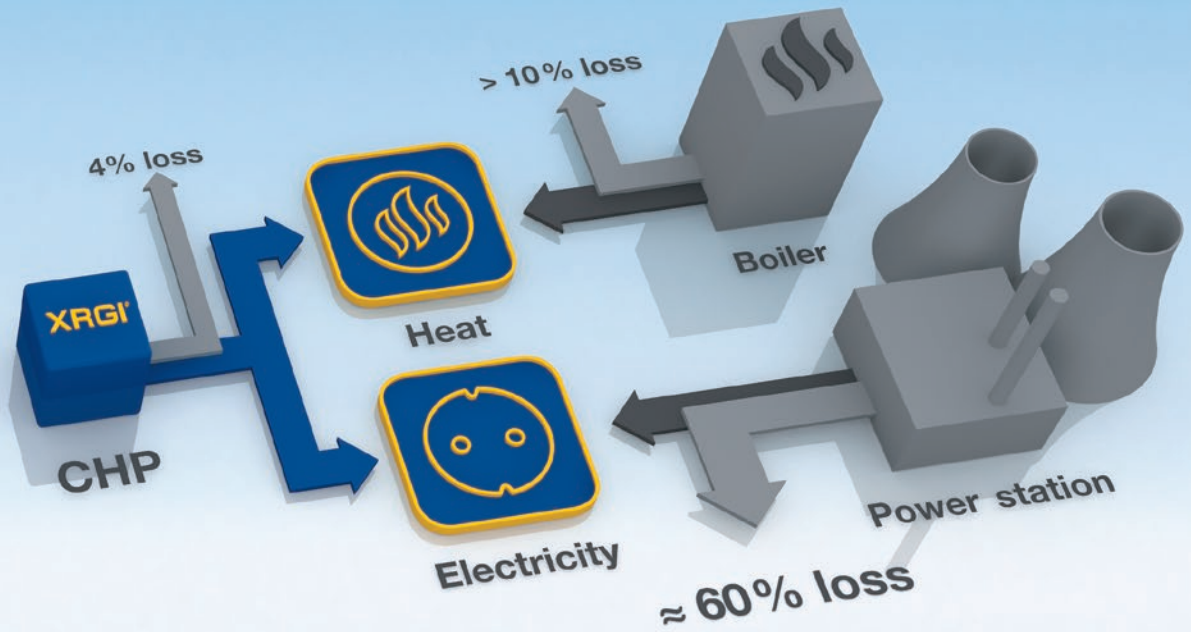
All XRGI® units are designed not only to operate as individual systems but also to operate in parallel, supplying electricity and heat tailored to all levels of demand. They can also be integrated into virtual power plants.

Make waste a thing of the Past

Imagine you have a nice juicy apple. You take one bite out of it and then throw the rest away. What a waste, you would probably say. But that is actually how electricity is currently produced in large-scale plants. Today's coal, gas and nuclear power stations fail to use a good two-thirds of their energy input.

Now imagine that you eat the entire apple except for the core and the stem. That is how you can picture cogeneration – the heat generated during electricity production is used as well.

Cogeneration – or combined heat and power (CHP) as it is also known – is the simultaneous production of electricity and heat. Unlike conventional power stations, which discharge unused heat into the atmosphere or nearest body of coolant water when they generate electricity, cogeneration units ensure that this heat is properly utilised, thus saving fuel money.



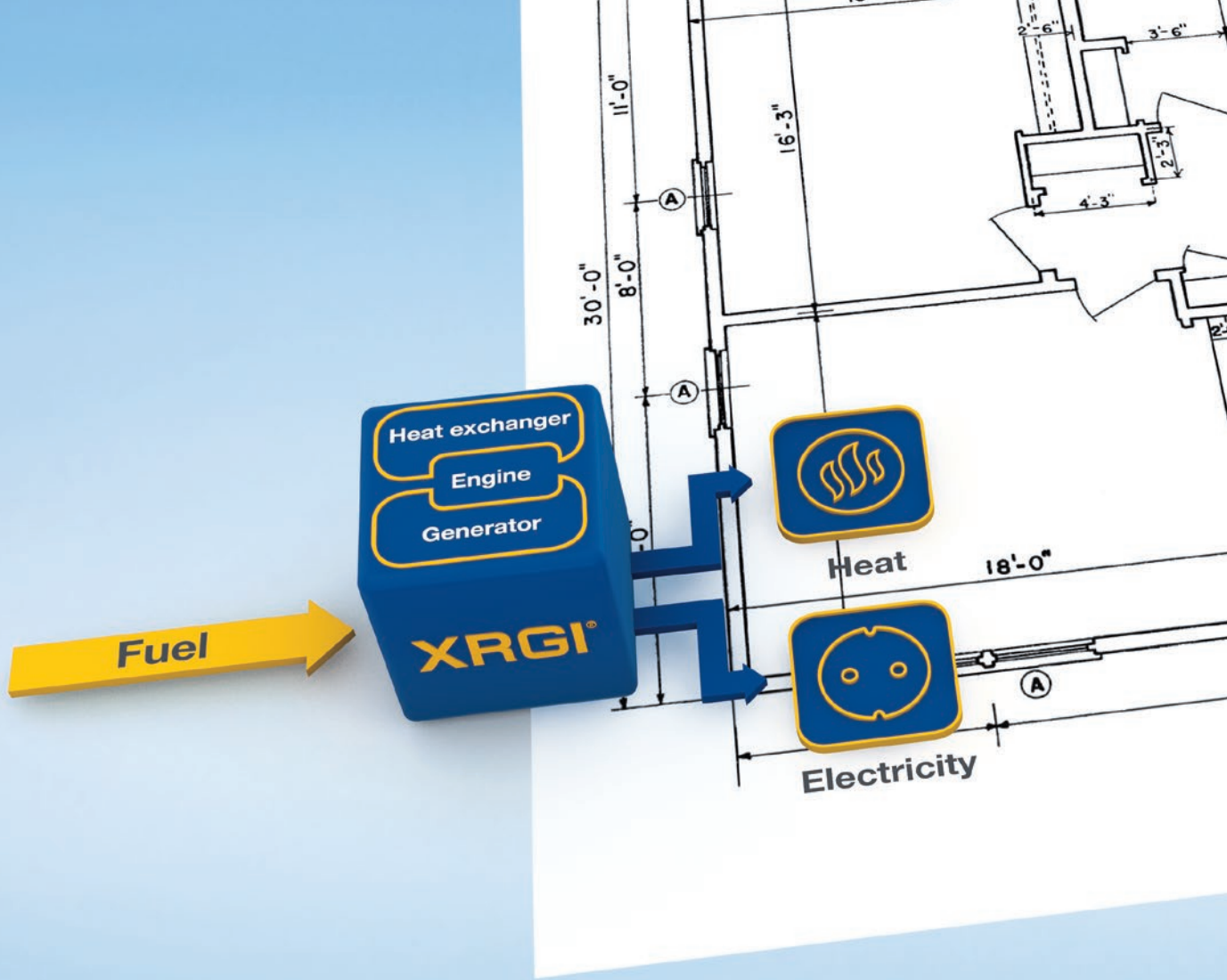
Switch to efficiency!

In conventional power stations almost 60 % of fuel energy is lost as electricity is generated. Most of the lost energy takes the form of unused heat discharged into the atmosphere or coolant water.

Why is this excess heat not used? Because conventional power stations are located far away from energy consumers, making it impossible to make sensible use of the heat in buildings.

This geographical separation between the suppliers and consumers, means that generated electricity has to be transmitted over large distances, resulting in transmission losses.

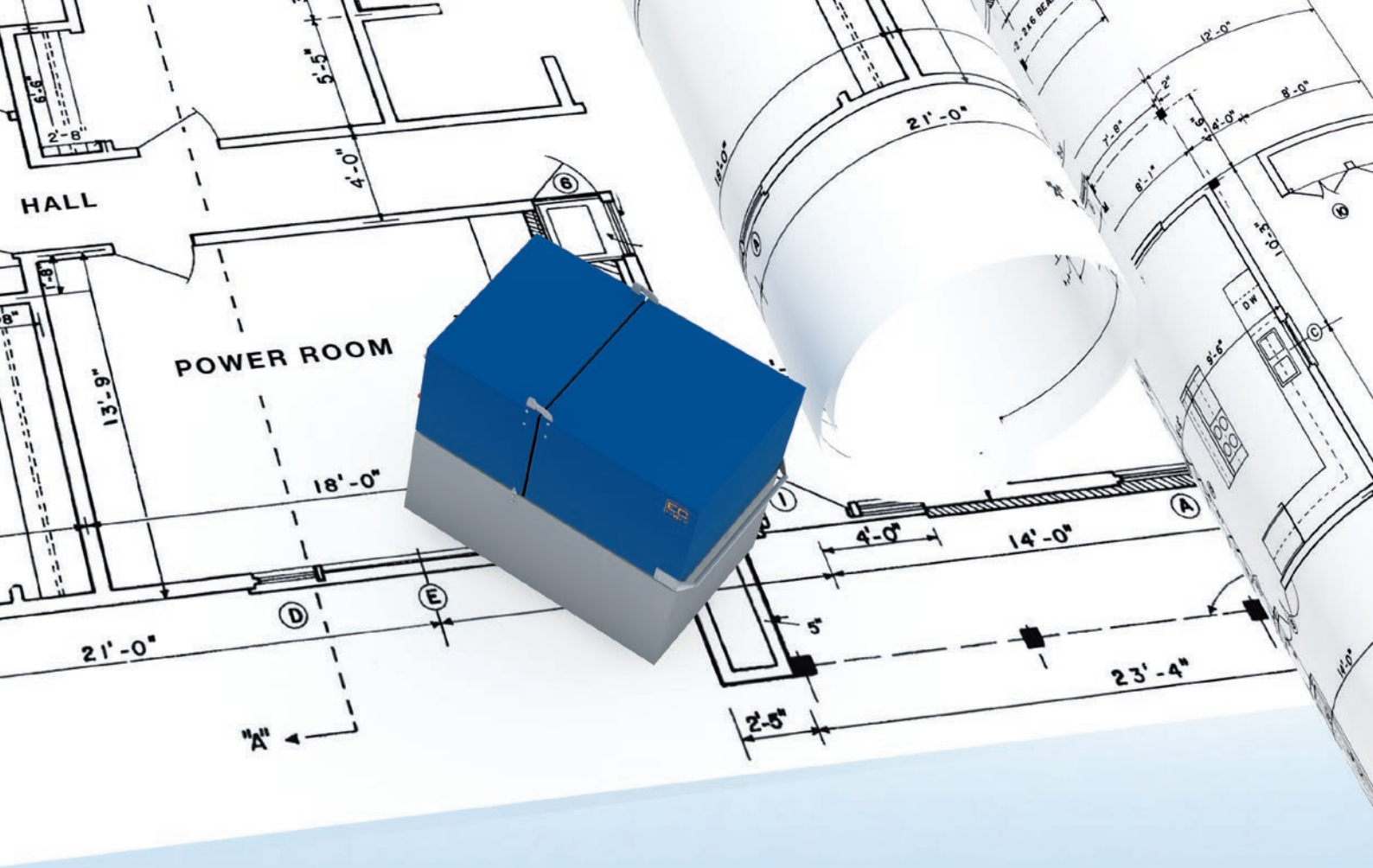
On the other hand, CHP generates electricity locally to where it is needed, reducing both grid costs and transmission losses. More than 96 % of fuel energy is put to good use. XRGI® units are not weather-dependent and thus maintain a clear advantage over solar and wind energy. It can therefore ensure a reliable supply of electricity and heat.



Energy the smart way: cogeneration

The XRGI® is a CHP unit employing the cogeneration principle.

Electricity is always generated according to the same principle: fuel is burned in a combustion engine. The energy released during this process drives a generator, comparable to the dynamo on a bicycle. This produces a great deal of heat. A cogeneration unit feeds this heat into a circuit – thus enabling it to be used for space heating or producing hot water. What makes cogeneration units so efficient is their dual use of the energy input. This is what we mean when we talk about high efficiency.



Install, connect, save

Tailor-made cogeneration technology from EC POWER will help you reduce your energy bills substantially.

Cutting your fuel consumption also helps to protect the environment and the climate. Another plus point: installing this technology will increase the value of your property.

We can help you save energy costs in all buildings with year-round heating requirements.

XRGI® – a quiet bundle of energy

5 dB (A) Grass growing

10 dB (A) Leaves rustling

20 dB (A) Laptop

42 dB (A) Fridge

45 dB (A) Library

49 dB (A) XRGI®

60 dB (A) TV at room volume

70 dB (A) Vacuum cleaner

80 dB (A) Motorbike

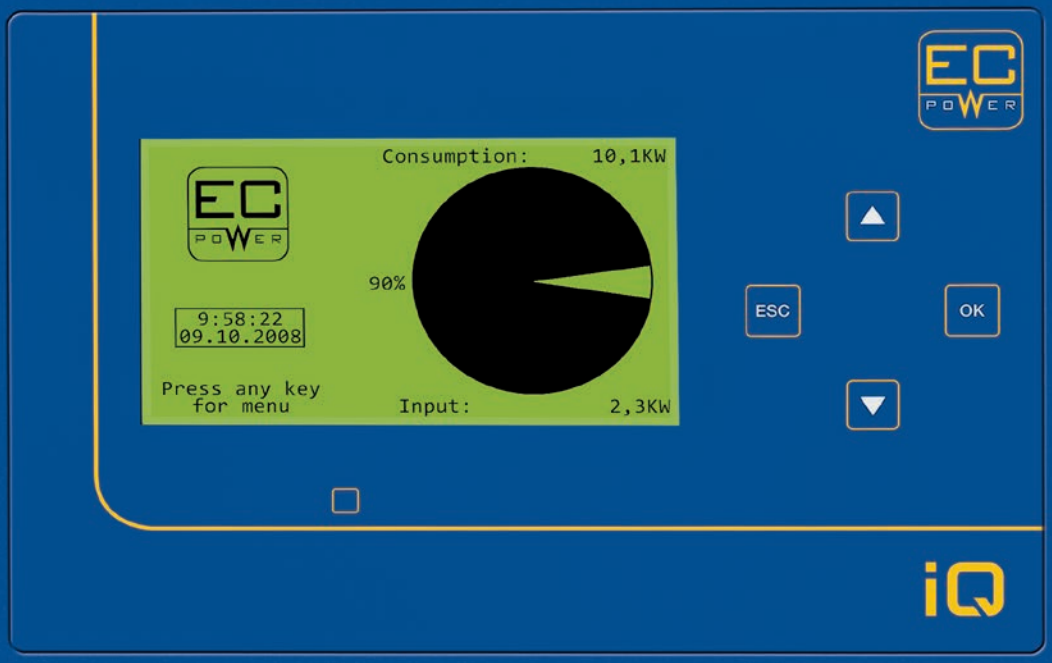
100 dB (A) Speakers in a disco
1 metre away

110 dB (A) Chainsaw 1 metre away

Two ways to save: space and money

The XRGI® is one of the most compact cogeneration units in the 3 – 80 kW_{el} class. The XRGI® consists of three components: the power unit plus engine, the Q-heat distributor and the iQ-control unit.

Its flexible construction principle and compact dimensions – with a width of only 64/75 cm – mean it will fit into any basement and can easily be integrated into the building's existing energy supply system.



Unique: the IQ intelligent control unit

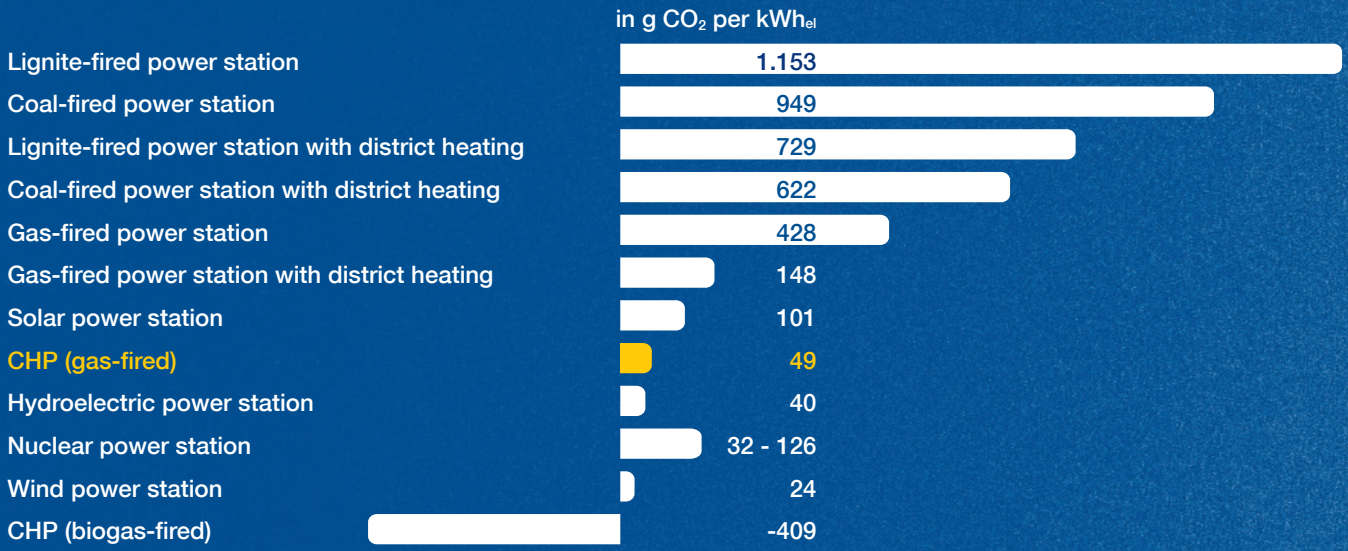
You can choose between power- or heat-controlled operation of your XRGI®. The control unit constantly analyses your needs and automatically ensures optimal operation. One of the benefits of this operating mode is that the flow temperature always remains constant even when the return temperature fluctuates, guaranteeing long and efficient operation. The control unit allows you to adapt quickly to the constantly changing energy market and to bring your chosen operating strategy into line with new regulations quickly and easily.

Good for you, good for the environment.

>50%

CO_2 reduction

A comparison of the CO_2 - emissions of different power generators:



Source: Öko-Institut, Darmstadt 2007

XRGI®

ELECTRIFYING HEAT

	6	9
		
Max. noise level dB(A)	49	49
Dimensions (LxWxH) cm	92 x 64 x 96	92 x 64 x 96
Floor area m^2	0,59	0,59
Weight kg	440	440
Service interval hours	10,000	10,000
Fuels: natural gas (all qualities), **propane, butane**	yes	yes
Electrical output (modulating) kW	2,5–6	4–9
Thermal output kW	8–13,5	12–20
Power consumption (gas) kW	21	31
Electrical efficiency	29,5 %	29,5 %
Thermal efficiency (excluding optional condenser)	63,5 %	63,5 %
Total efficiency (excluding optional condenser)	93 %	93 %
Flow temperature (constant) °C	80–85	80–85
Max. Return temperature (variable) °C	5–75	5–75
Maximum exhaust gas temperature °C	100	100
Emissions	CO: < 150 mg / Nm^3 NOX: < 350 mg / Nm^3	CO: < 50 mg / Nm^3 NOX: < 100 mg / Nm^3
Primary energy saving PES (EU Directive, verification in accordance with DIN 4709)	20,3 %	22,4 %

15

20

49	49
125 x 75 x 111	125 x 75 x 111
0,93	0,93
700	750
8,500	6,000
yes	yes
6 – 15	10 – 20
17 – 30	25 – 40
49	62,5
30 %	32 %
62 %	64 %
92 %	96 %
80 – 85	80 – 85
5 – 75	5 – 75
120	120
CO: < 150 mg / Nm³ NOX: < 350 mg / Nm³	CO: < 50 mg / Nm³ NOX: < 100 mg / Nm³
22 %	25 %

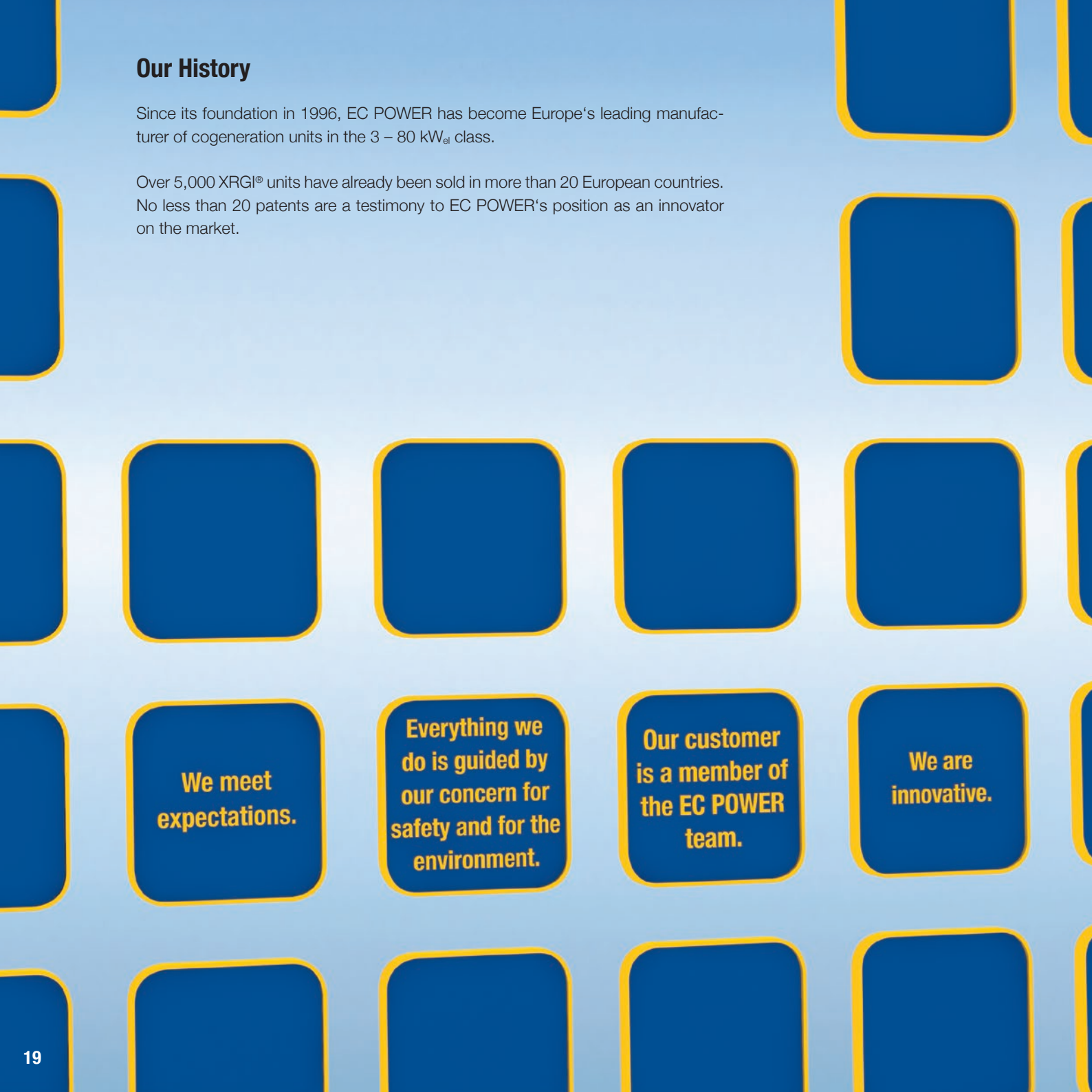
All values are net and have been certified by an independent inspection body.


Short amortisation time
Lowest noise level in the 3 - 80 kW_{el} class
Most compact and lightest in its class
Intelligent control unit
XRGI®
ELECTRIFYING HEAT
Easy to integrate
A quality product from a leading manufacturer
A valuable contribution to environmental protection
Tailored to fit your energy requirements

Our History

Since its foundation in 1996, EC POWER has become Europe‘s leading manufacturer of cogeneration units in the 3 – 80 kW_{el} class.

Over 5,000 XRGI® units have already been sold in more than 20 European countries. No less than 20 patents are a testimony to EC POWER‘s position as an innovator on the market.




EC POWER A/S
Samsøvej 25
DK 8382 Hinnerup
Tel.: (+45) 87 434 100
Fax: (+45) 87 434 101
Website: www.ecpower.eu
E-mail: info@ecpower.eu