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09/1019

# XRGI<sup>®</sup>

ELECTRIFYING HEAT



THE GOOD FEELING OF GENERATING  
**ELECTRICITY AND HEAT**  
CHEAPLY AND ENVIRONMENTALLY-FRIENDLY  
**YOURSELF**

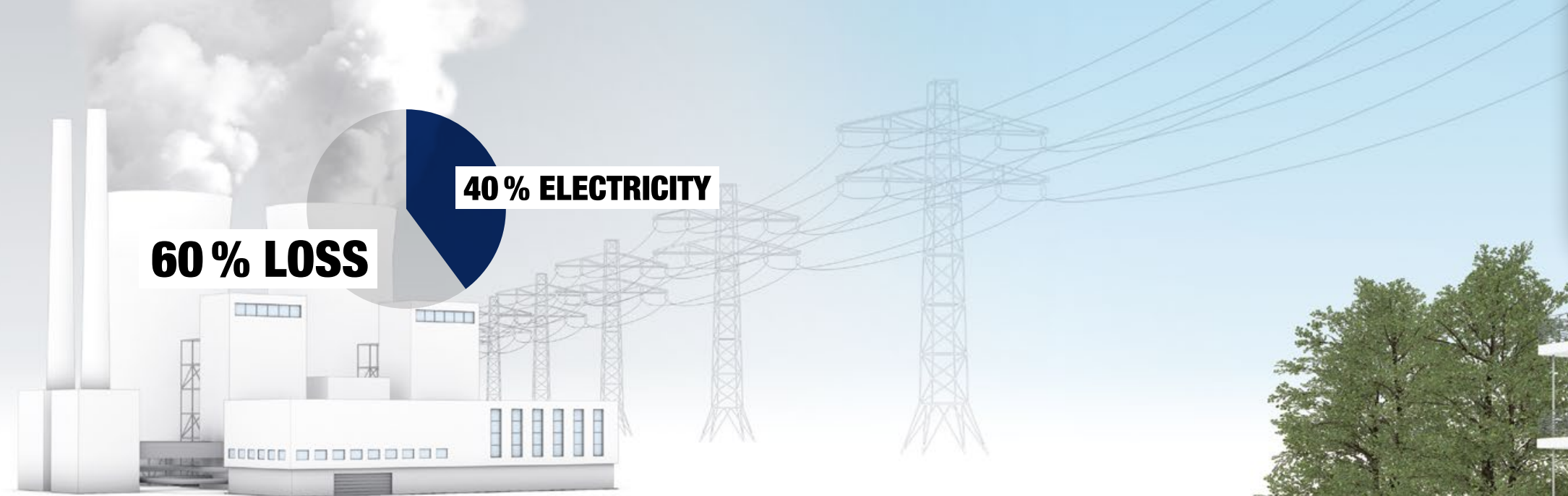
**YOUR OWN  
PERSONAL ENERGY REVOLUTION**

Rising energy prices, scarcer raw materials and environmental damage from air pollution make the pursuit of an alternative energy policy, often referred to as the 'energy revolution', one of the most important challenges facing politicians and society today. We are all called upon to do our bit to handle precious resources more sustainably.

With an XRGi®, you will not just make a valuable contribution to climate protection, you will also reduce your energy costs without missing out on anything! The highly efficient principle of combined heat and power makes this possible.





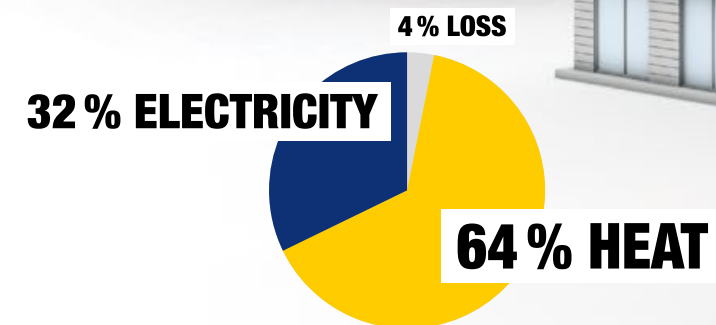
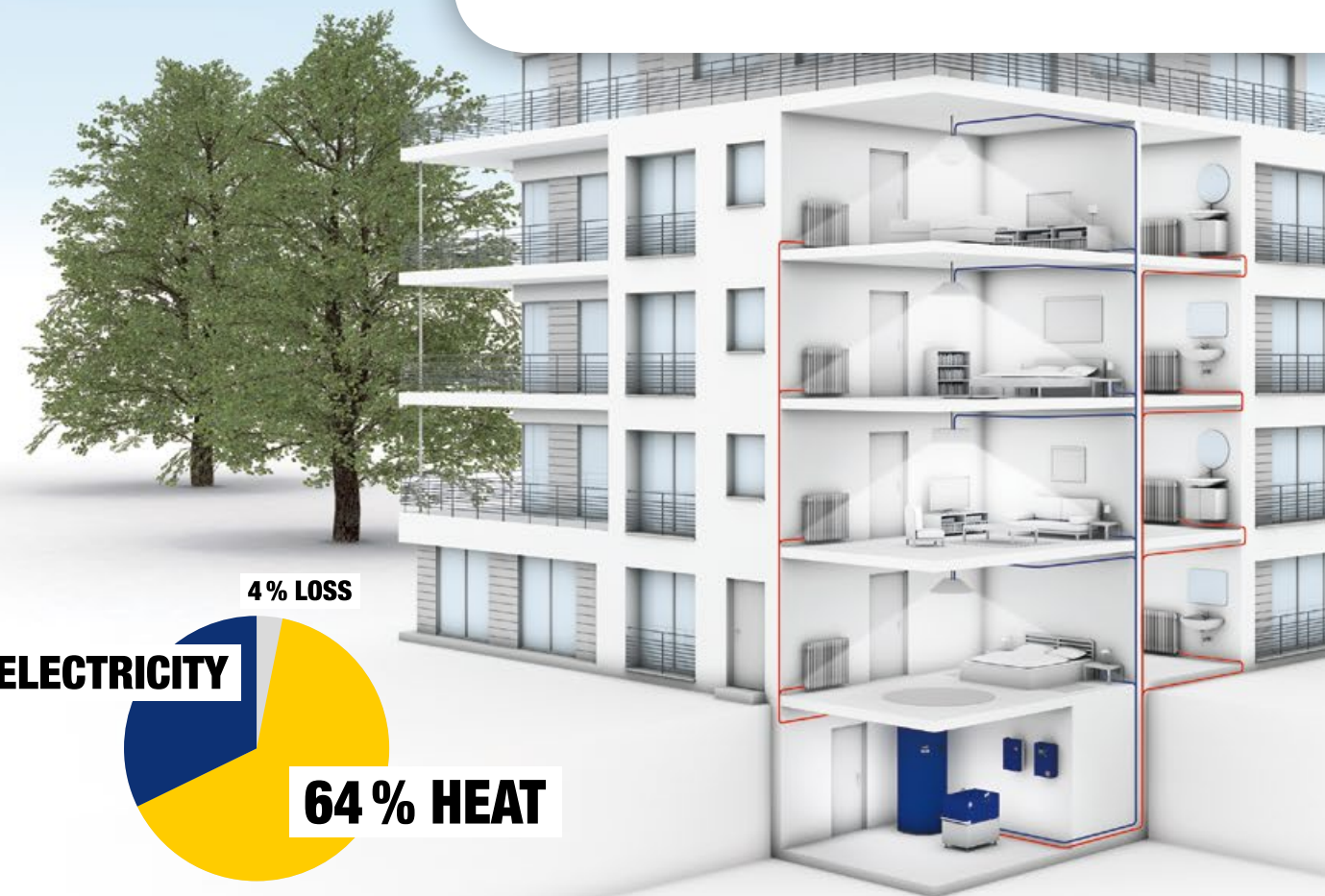


Conventional power stations utilise only about 40 % of the fuel used, as they only generate electricity. The heat (waste heat) produced is unused and discharged into the environment with damaging consequences.

One reason for this waste is the fact that conventional power stations produce electricity remotely from their consumers. This large distance means that it is not economically viable to transport the waste heat to homes to be put to good use. There is a further disadvantage associated with this distance: the electricity generated in the power station has to be transported to the consumer, with transmission losses occurring on the many kilometre-long route.

The XRGI® is installed precisely where the electricity and heat are needed, reducing network costs and avoiding transmission losses.

A SIMPLE YET  
**INGENIOUS PRINCIPLE:**  
COMBINED  
**HEAT AND POWER**



A fuel is burned in an internal combustion engine. The kinetic energy released in this process drives a generator that produces electricity. The XRGI® captures the heat produced and feeds it into a circuit – thus enabling it to be used for space heating or producing hot water. Up to 96 % of the primary energy used is therefore utilised. It is this excellent performance level that makes the XRGI® so efficient.

UP TO  
**96 %**  
EFFICIENCY



# **XRGI®**

**SIMPLIFIES YOUR CHANGE  
TO MORE  
EFFICIENT ENERGY**

## **ANYONE CAN SWITCH WITH XRGI®**

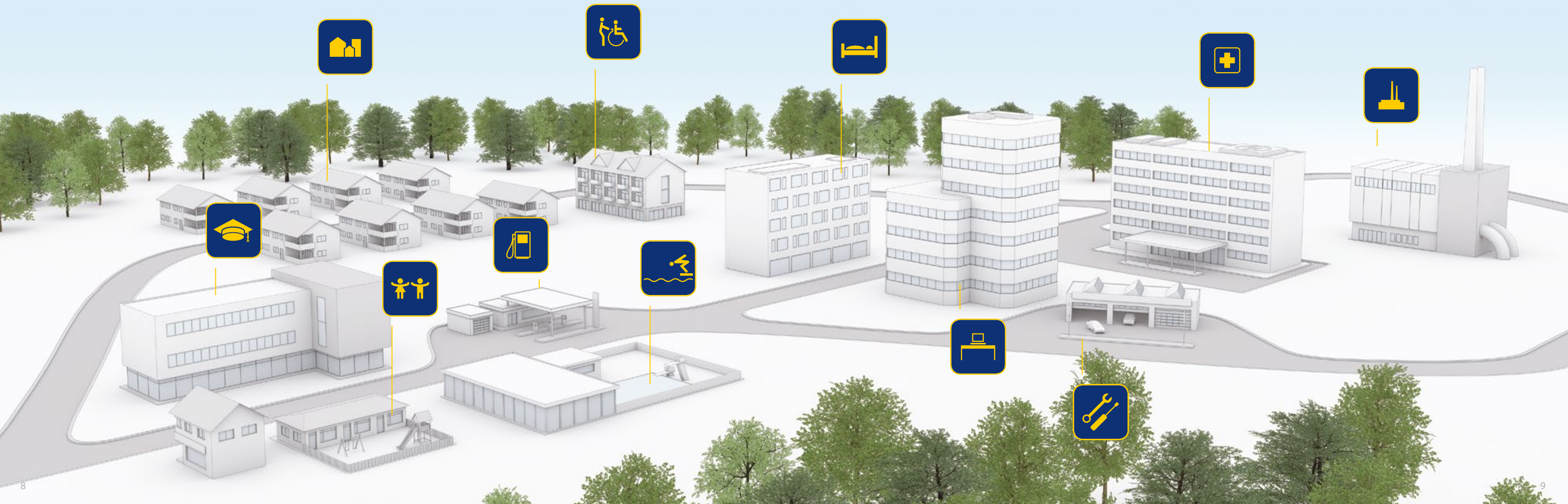
Regardless of whether you are planning a new building or modernising an existing one – the XRGI® is always the right choice. It improves the property's carbon footprint, ensuring a good energy performance certificate and thereby enhancing the value of the property. The modular construction of the XRGI® makes it possible to switch to combined heat and power, also known as cogeneration, even in difficult structural situations. It can easily be integrated into an existing supply system.



FOR  
**ALL PROPERTIES**  
THAT NEED ELECTRICITY AND HEAT  
**THE WHOLE YEAR ROUND**

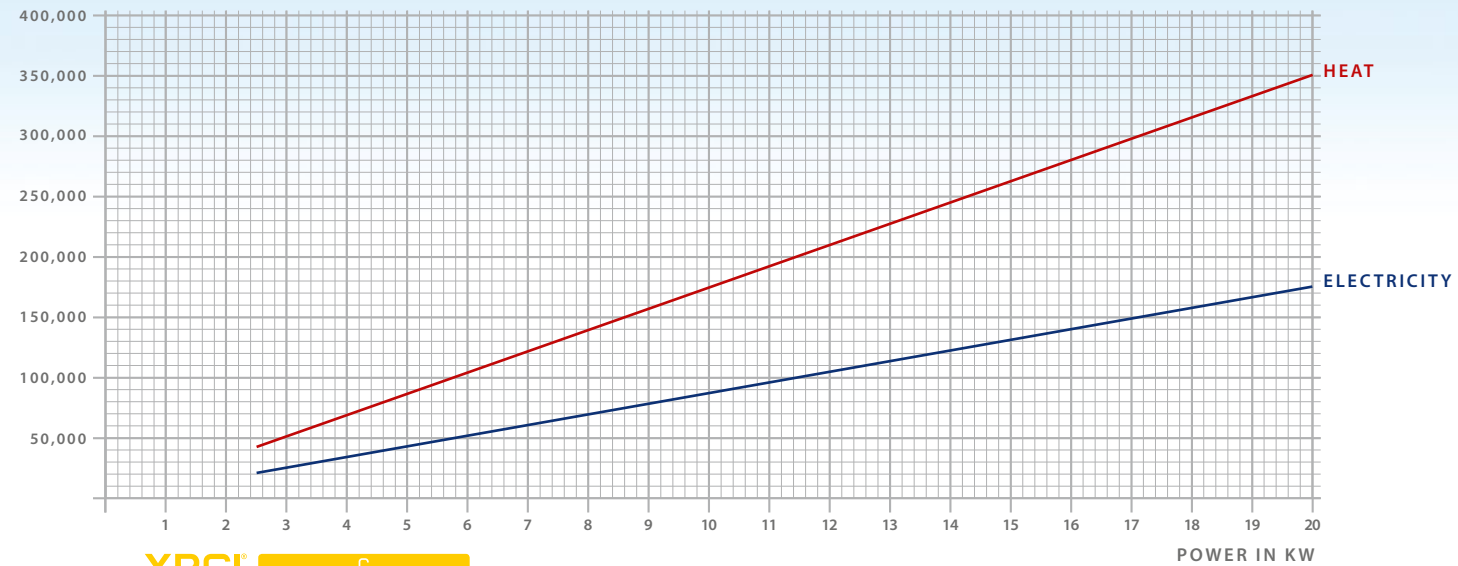
**SUPPLYING PROPERTIES, INDUSTRY  
AND DISTRICT HEATING NETWORKS**

From apartment blocks to municipal buildings – an XRG<sup>®</sup> supplies electricity and heat to any building with an annual heat requirement of 30,000 to 2,000,000 kWh – economically and eco-friendly. This is possible by operating XRG<sup>®</sup> systems in parallel rather than just as single systems, the product range covering 3 to 80 kW<sub>el</sub>. And the reliable and efficient supply is also ensured for buildings connected to a virtual power plant, where several XRG<sup>®</sup> systems at different locations are connected to form a network.



FOR  
**ALL PROPERTIES**  
THAT NEED ELECTRICITY AND HEAT  
**THE WHOLE YEAR ROUND**

ENERGY REQUIREMENT IN KWH/YEAR



XRG1

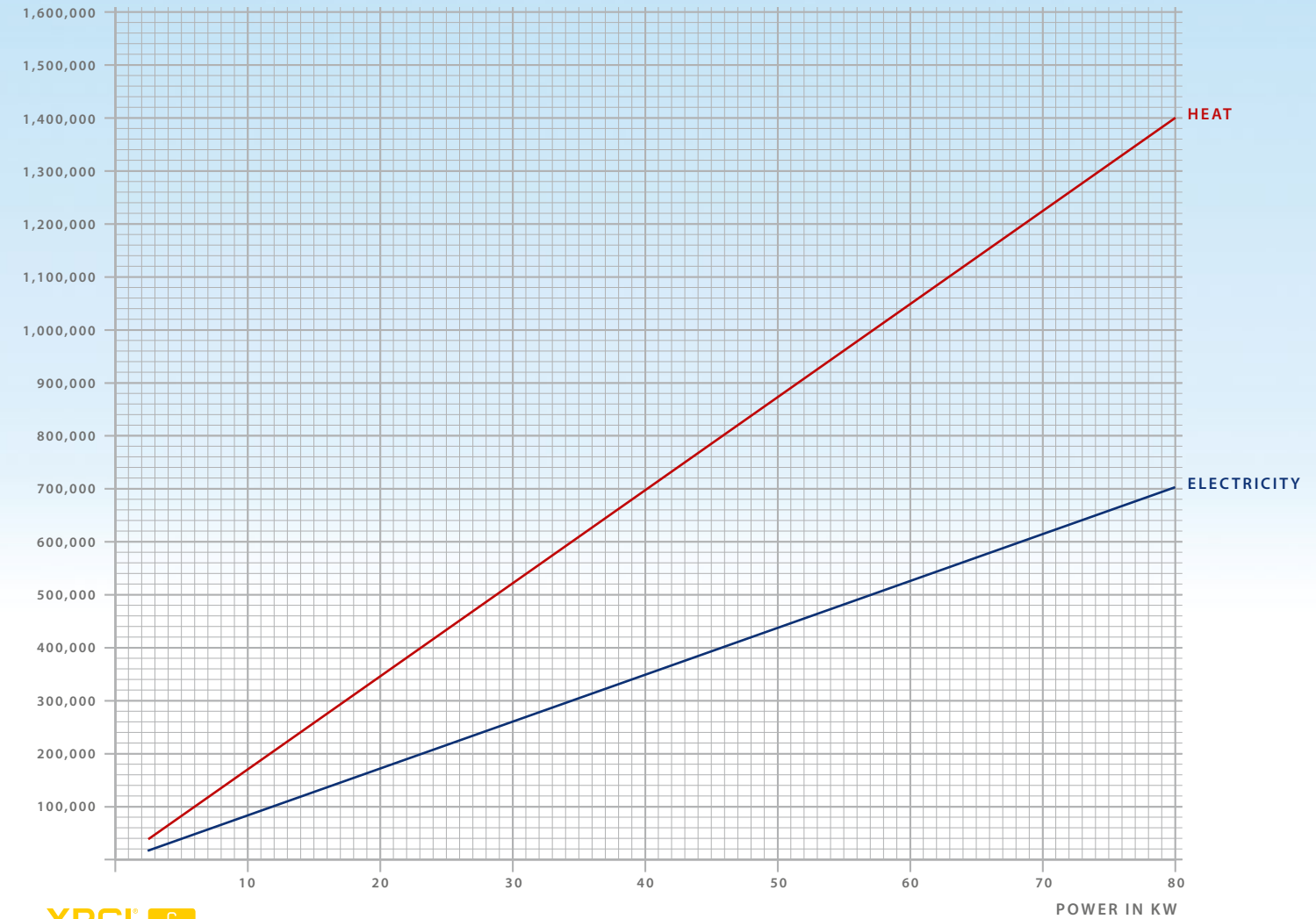
6

9

15

20

ENERGY REQUIREMENT IN KWH/YEAR



XRG1

6

9

15

20

XRG1® IN PARALLEL OPERATION

# THE RIGHT AND TAILOR-MADE SOLUTION FOR EVERY REQUIREMENT



## THE ENDURING MINIS: XRGi® 6 & XRGi® 9

A newly developed high-performance engine makes our “small systems” into real endurance runners with service intervals of 10,000 operating hours. The XRGi® 6 and the XRGi® 9 achieve overall efficiency rates of up to 95 %\* – even higher with optional condenser. These two models are ideal for large detached houses and smaller apartment blocks, hotels or office buildings.



## THE CLASSIC: XRGi® 15

The XRGi® 15 is perfect for larger buildings, such as hotels, farms or nursing homes. With an overall efficiency rate of 92%\*, its efficiency and quality have already been proved in the form of thousands of satisfied customers. The XRGi® 15 has already received multiple awards.



## THE POWER PACK: XRGi® 20

The XRGi® 20 achieves an overall efficiency rate of 96 %\*. It comes into its own in properties, such as hospitals or municipal utilities.

## XRGi® – OUTSTANDING CUTTING-EDGE TECHNOLOGY

EC POWER has redefined the state of the art for combined heat and power plants with the XRGi® 15 and the XRGi® 20. Predominantly larger properties, like hotels, hospitals and care homes, can now benefit from this. The XRGi® 6 and XRGi® 9 complete the sub-50 kW<sub>th</sub> range. These systems also make combined heat and power plants of interest for larger detached houses, smaller apartment blocks and small hotels.



## PARALLEL OPERATION

All XRGi® systems are designed to operate not just as individual systems. Their modular design enables them to be controlled flexibly, economically and efficiently in parallel, supplying electricity and heat tailored to all levels of demand. They can also be integrated into virtual power plants.

\* Figure without condenser



# XRGI®

## STATE OF THE ART



### STORAGE TANK

- Stores excess heat in the event of high demand for electricity
- Reserve in the event of high demand for heat



### POWER UNIT

- Engine drives generator
- Generator produces electricity
- Heat exchanger transfers heat to the Q-Heat Distributor



### Q-HEAT DISTRIBUTOR

- Absorbs heat from the Power Unit
- Distributes heat to the water circuit and/or Storage Tank



### iQ-CONTROL PANEL

- Controls the system to meet requirements
- Analyses in real-time your consumption patterns and optimises operation fully automatically



### THAT'S SYSTEMATIC EFFICIENCY

An XRGI® system consists of three main components – Power Unit, Q-Heat Distributor and iQ-Control Panel. You can also extend your XRGI® system with a Storage Tank with a capacity of 500, 800 or 1,000 litres.

The Power Unit is the heart of every system. Its engine was specially developed for EC POWER and is exceptionally durable and reliable. The heat generated from the engine is transferred via the Q-Heat Distributor to the property's heating circuit, to which the Storage Tank is also connected. The iQ-Control Panel is the brain of the system and controls the Power Unit in line with your requirements – optimising its operation fully automatically.

Unlike what is usual in the industry, all individual components, including software, as well as their interaction have been tested and certified by an independent inspection body, ensuring that the XRGI® meets the highest safety standards. The German Technical and Scientific Association for Gas and Water E.v. (DVGW) also certified the special quality of XRGI® products.





SIMPLE

# INTEGRATION OF THE XRGI® INTO THE EXISTING SUPPLY SYSTEM



## INSTALL, CONNECT, SAVE

In its class of 3–80 kW<sub>a</sub>, the XRGI® is one of the most compact cogeneration plants on the market. The modular design of the XRGI® and a patented integration principle mean that it will fit with ease into any basement or plant room. The Power Unit needs less than a square metre of space and fits through all doors.

An improved carbon footprint and lower energy costs increase the value of your property.

**64-75  
CM**  
**NARROW**

EXCELLENT  
**EFFICIENCY**  
DOES NOT NEED TO  
**SHOUT ABOUT IT**



### THE XRGI® – A SILENT POWER HOUSE

The XRGI® is one of the quietest cogeneration systems on the market. With a noise level of just 49 dB(A) at full power, measured from a distance of 1 metre, it is quieter than a conventional boiler. Fitted with an additional exhaust gas silencer and vibration damper, the noise level can be reduced even further, with the result that there are virtually no limits to the possible uses of the XRGI®. Unlike other systems, the plant room does not require mechanical ventilation for the XRGI®, avoiding the additional noise generated by a ventilation system and thereby ensuring unsurpassed quiet operation.



**49**  
dB(A)  
QUIET



All readings taken from a distance of 1 metre

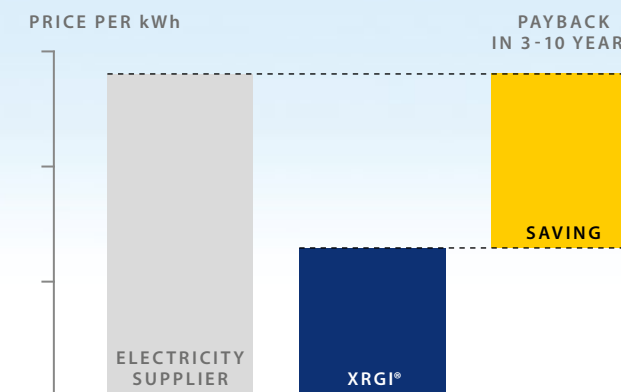


BECOME  
**SELF-SUFFICIENT!**  
IT'S WORTH YOUR WHILE

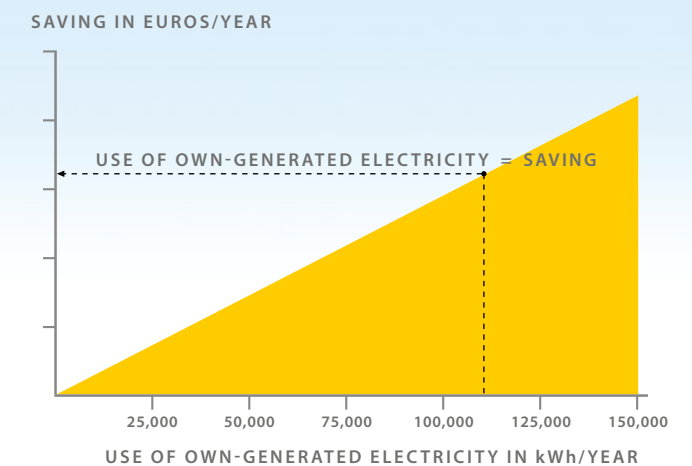


### BENEFIT FROM MAXIMUM POSSIBLE OWN USE

You can either sell your own-generated electricity or use it yourself. A simple calculation makes the benefits clear: the higher the amount of own-generated power in your overall electricity consumption, the higher the savings.



INCLUDING COST OF GAS, TAX, FUNDING,  
REPAYMENT, FULL MAINTENANCE COSTS



Calculations depend on your provider's current electricity and gas charges.

BECOME  
**SELF-SUFFICIENT!**  
IT'S WORTH YOUR WHILE

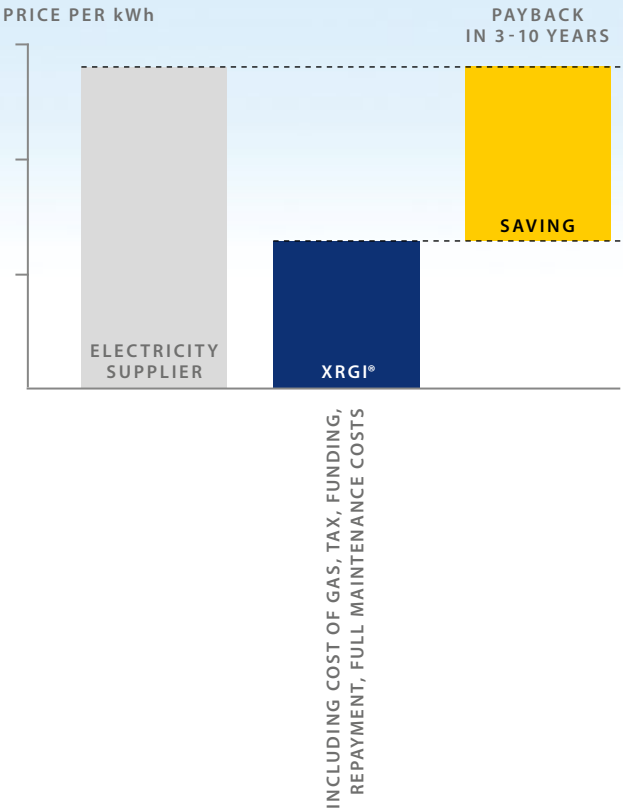
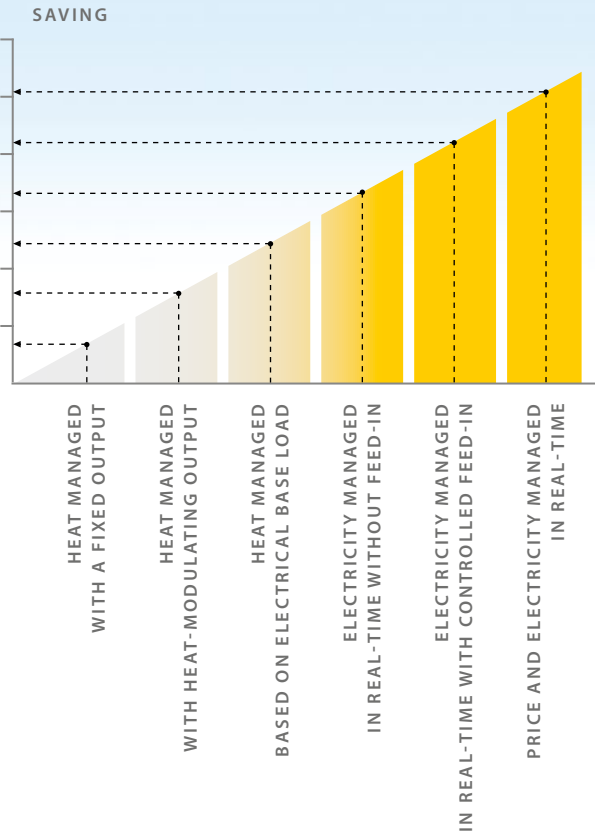
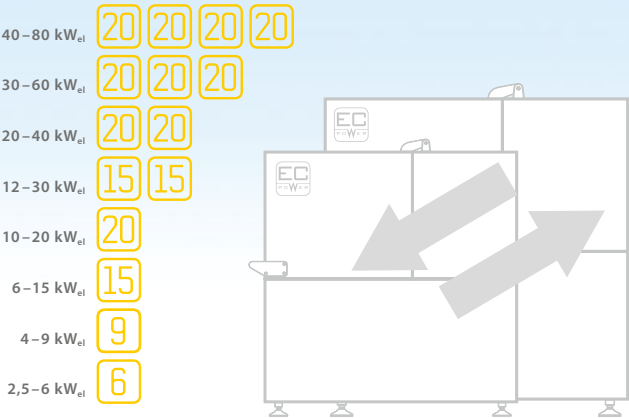
CORRECTLY SIZED



OPTIMUM OPERATING STRATEGY



MAXIMUM PROFIT



EXAMPLE:  
REAL USAGE IN WITTENSEE, GERMANY  
ELECTRICITY REQUIREMENT: 125,295 kWh PER YEAR  
HEAT REQUIREMENT: 190,782 kWh PER YEAR

	XRGI® 6	XRGI® 15
ELECTRICITY PRODUCTION FROM COGENERATION	52,560 kWh	85,661 kWh
ELECTRICITY PURCHASED FROM ELECTRICITY PROVIDER	72,790 kWh	43,611 kWh
CONTROLLED FEED-IN	55 kWh	3,976 kWh
HEAT PRODUCTION FROM COGENERATION	111,356 kWh	180,181 kWh
HEAT PRODUCTION FROM BOILER	79,426 kWh	10,601 kWh
OPERATING HOURS OF CHP/YEAR	8,760 Op.h.	6,159 Op.h.
ANNUAL SAVINGS	€8,028	€14,064

HEAT MANAGED BASED ON ELECTRICAL BASE LOAD

ELECTRICITY MANAGED IN REAL-TIME WITH CONTROLLED FEED-IN

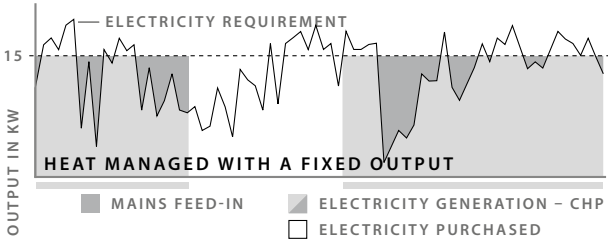


# UNIQUE INTELLIGENT TECHNOLOGY TO MEET MAXIMUM DEMAND

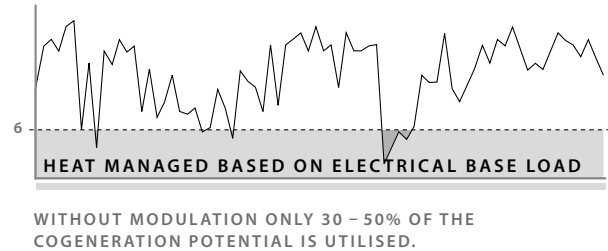
A mastermind hides behind every business success. As with the XRGi®: The intelligent iQ-Control Panel regulates the operation of the XRGi® components fully automatically – focusing on electricity, heat or tariff, depending on the operating strategy.

## CHP HEAT-MANAGED

EXAMPLE: CHP WITH 15 KW<sub>EL</sub>  
SYSTEM SIZED ACCORDING TO DEMAND PEAKS

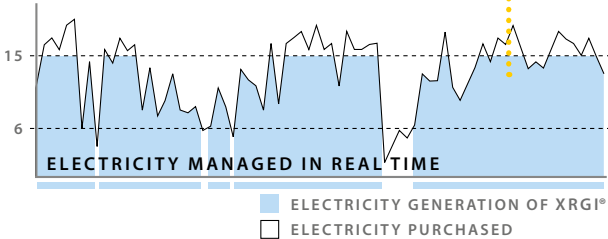


EXAMPLE: CHP WITH 6 KW<sub>EL</sub>  
SYSTEM SIZED ACCORDING TO BASE REQUIREMENT



## XRGi® WITH PATENTED REAL-TIME MODULATION

EXAMPLE: XRGi® 15 WITH 6 - 15 KW<sub>EL</sub>  
MAXIMUM USE OF COGENERATION POTENTIAL



### OUTPUT MODULATION BY UP TO 50 %

- iQ analyses your consumption and adapts the operation of your XRGi® in real time.
- Thanks to patented real-time modulation, the XRGi® can be set up based on actual demand, thereby achieving much higher efficiency.

### STORAGE MANAGEMENT

iQ and Storage Control ensure that the heating circuit and Storage Tank can absorb the heat generated during power generation.

AUTO-ADAPTIVE  
**INTELLIGENT  
CONTROL**

PATENTED  
**REAL-TIME  
MODULATION**

INTELLIGENT  
**STORAGE  
MANAGEMENT**

The iQ-Control Panel learns the consumption patterns in the property and produces intelligent user profiles. It then creates forecasts for expected consumption based on these user profiles. It continuously compares the projected consumption with the actual consumption and optimises the user profile in real time.

A combined heat and power plant produces electricity for as long as the heat produced can either be consumed or stored. With the help of its forecasts, the iQ-Control Panel then practises intelligent storage management. It makes predictions about when demand for electricity will be particularly high and compares this with the anticipated heat requirement. The iQ-Control Panel also ensures that the Storage Tank always has the maximum possible capacity free to absorb the heat produced during electricity generation.

The XRGi® achieves maximum efficiency thanks to its real-time modulation. You will be exploiting 100% of the potential of your combined heat and power plant due to the fact that it can vary its output by up to 50%.

With this unique energy management system, you will always be able to meet the changing conditions on the energy market quickly and flexibly – even with new future legislative regulations.

That makes the XRGi® incomparably efficient.

**UP TO 30 % HIGHER OWN ELECTRICITY NEEDS MET THAN WITH STANDARD CHP**

**100% USE OF COGENERATION POTENTIAL**

**PREVENTS UNNECESSARY FEED-IN OF ELECTRICITY, IMPROVING EFFICIENCY**



## WIND ENERGY

Wind energy is unrestrictedly available and can be converted into environmentally friendly electricity. However, the wind is variable and therefore difficult to calculate. If the wind speed is too low, insufficient electricity is produced; if the wind speed is too high, it can overload the mains grid. Furthermore, wind turbines generate noise.



## SOLAR ENERGY

Solar energy could meet the electricity requirements of the entire world population but the duration and intensity of the sun fluctuate greatly at our latitudes. At times of minimal sun, production is insufficient to meet actual demand.

# A STRONG PARTNER IN EVERY RESPECT

The future belongs to green energy. Green energy is the only way to replace polluting coal-fired, gas-fired and nuclear power stations. The XRGI® is joining the ranks of environmentally friendly sources of energy. It utilises the fuel used extremely efficiently so that emissions of harmful greenhouse gases are reduced to a minimum.

In doing so, the XRGI® operates independently of wind and sun – the volume of electricity and heat produced is determined by your needs and not by the weather. This makes the XRGI® both an ideal addition to wind power and photovoltaic systems, as well as a useful alternative.

## COGENERATION

An XRGI® allows you to generate energy at any time on site – planned, demand-controlled and independent of the weather.





A  
**STRONG BRAND**  
WITH INNOVATIVE STRENGTH

AUTO-ADAPTIVE  
**INTELLIGENT  
CONTROL**

PATENTED  
**REAL-TIME  
MODULATION**

INTELLIGENT  
**STORAGE  
MANAGEMENT**

VERY FAST  
**PAYBACK**

**EASY**  
INTEGRATION

UP TO  
**10,000  
OPERATING HOURS  
SERVICE  
INTERVAL**

EFFICIENCY CLASS  
**A+++**

THE  
**QUIETEST**  
IN ITS CLASS

**VALUABLE**  
CONTRIBUTION TO  
ENVIRONMENTAL  
**PROTECTION**

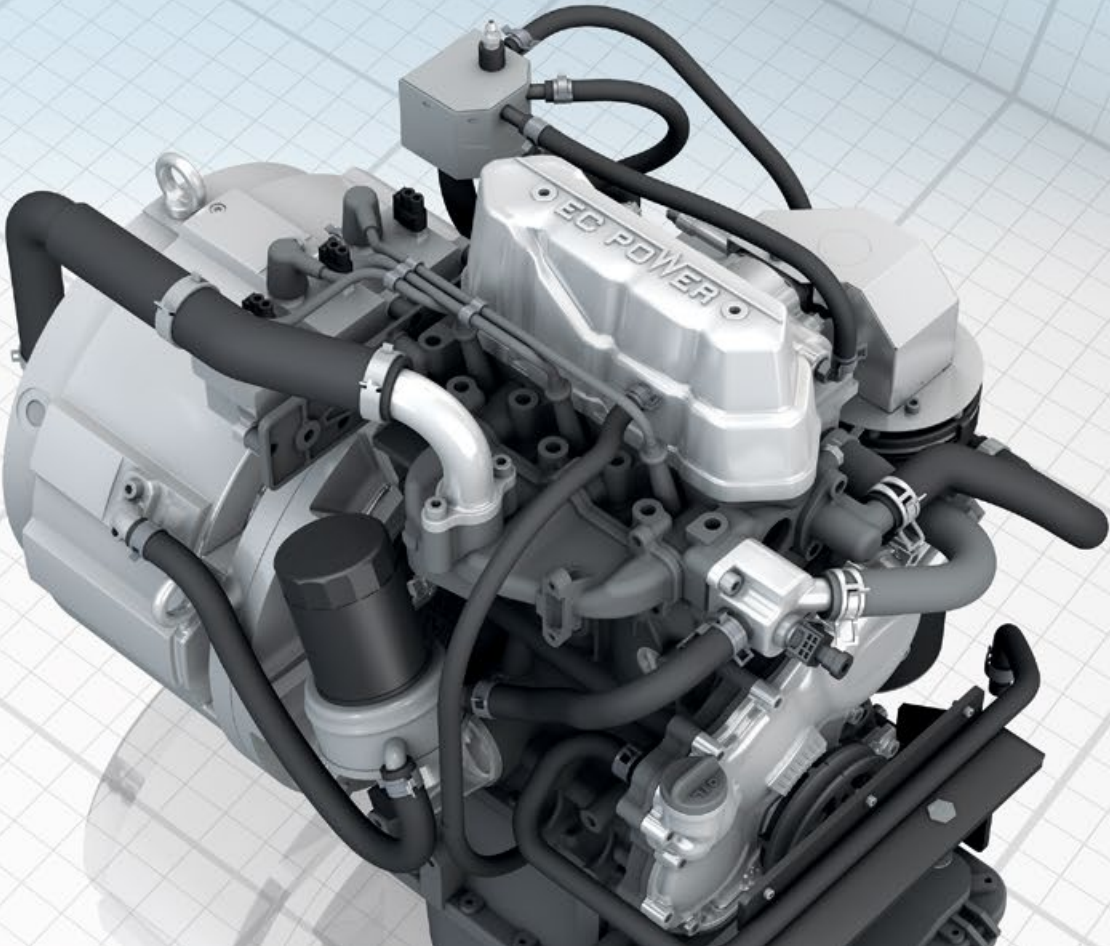
**QUALITY**  
FROM THE  
**LEADING  
MANUFACTURER**

**PROMOTED  
AND  
FUNDED**

**WHAT MAKES THE XRG1® SO SPECIAL?**

Overall efficiency rate of up to 96%, service intervals of up to 10,000 operating hours, certified and award-winning technology and, above all, its unique energy management technology for maximum efficiency speak for themselves. And most importantly: many years of satisfied customers.

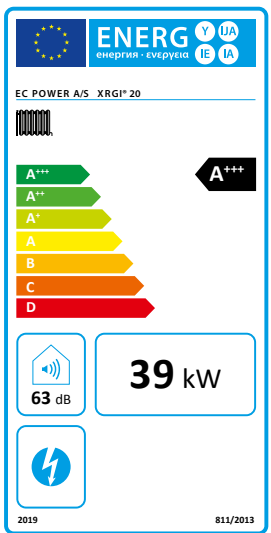
Since it was established in 1996, EC POWER has grown to become the technologically leading European producer of combined heat and power plants ranging from 3 to 80 kW<sub>el</sub>. More than 20 patents are testament to the outstanding innovative strength of EC POWER. Over 10,000 XRG1® systems have already been sold in 27 European countries.



ENERGY. EFFICIENCY.

**A+++**

CLASS



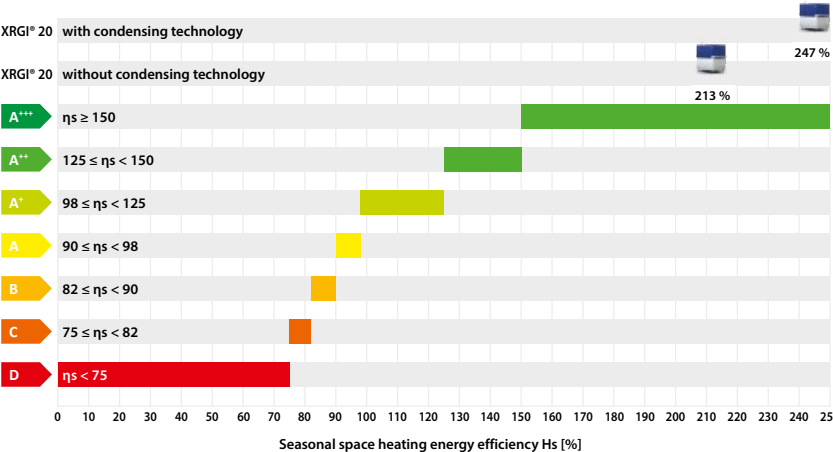
Example: Product label for the XRGi® 20

NOW YOU CAN FINALLY COMPARE:

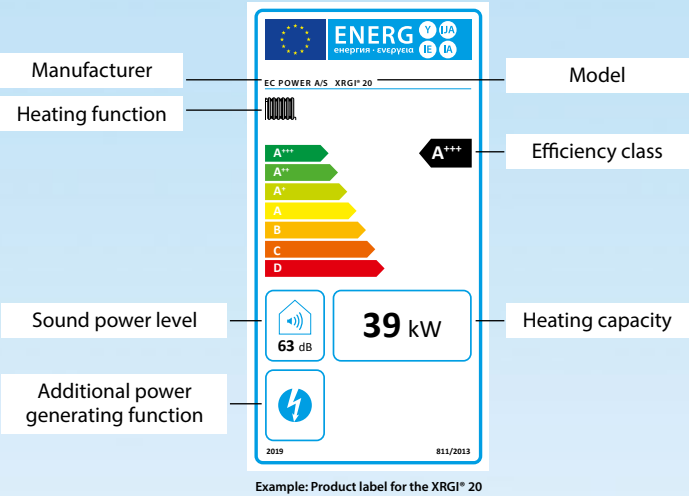
Refrigerators, televisions and washing machines have carried an energy efficiency label for several years now – appliances that we can't imagine being without. This now also includes the XRGi®.

This label has been mandatory on space heaters since 26 September 2015. The individual components of a heating system carry a product label. The XRGi® carries the highest efficiency class label: **A+++**.

The new labelling of heating systems with efficiency labels is based on European Union (EU) guidelines and regulations. This means that the labelling is standardised throughout Europe and the calculation is based on procedures defined by the EU Commission. This offers you a basis for comparison and thus helps when making a decision about an initial purchase or modernisation of a heating system.

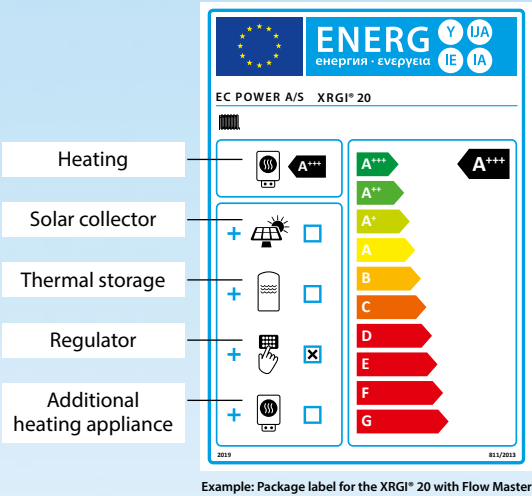


PRODUCT LABEL



Example: Product label for the XRGi® 20

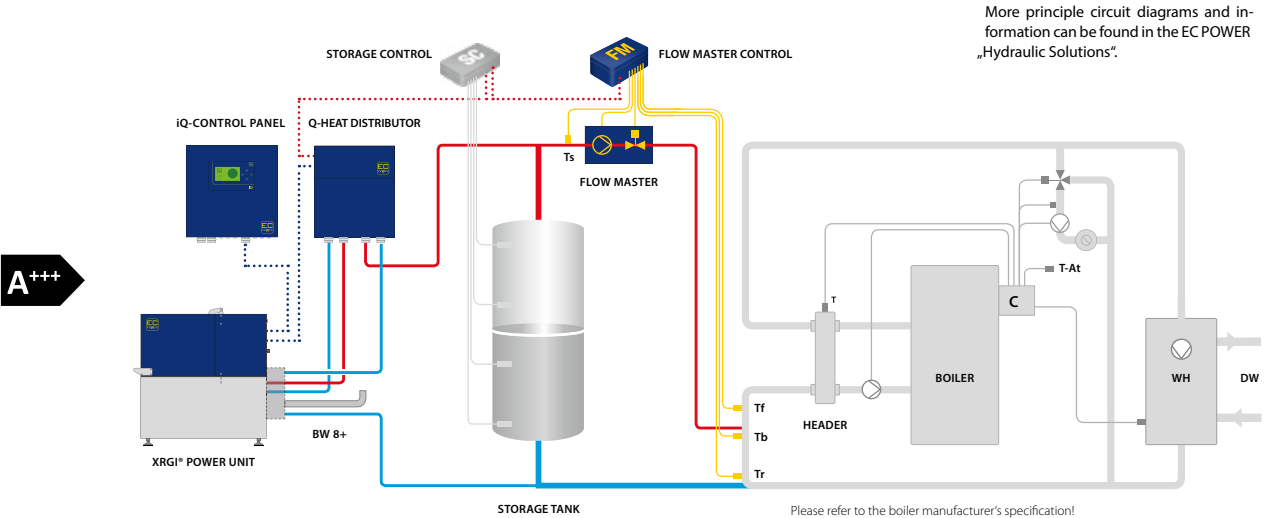
PACKAGE LABEL



Example: Package label for the XRGi® 20 with Flow Master

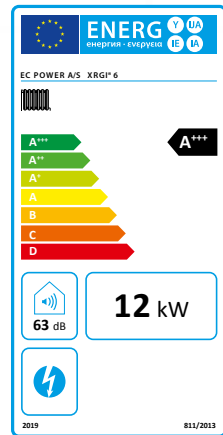
PERFECTLY GEARED TO EACH OTHER:

As heating systems consist of several components and all components affect the efficiency of the overall system, package labels are now being added to product labels.






# XRGI® 6



XRGI® system		
Modules		
Seasonal space heating energy efficiency class <sup>2</sup>		
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>		
Power modulation*		
Electrical output, modulating*	kW	
Thermal output, modulating*	kW	
Electrical efficiency    in accordance with LCV <sup>4</sup>	%	
Thermal efficiency    in accordance with LCV <sup>4</sup>	%	
Total efficiency    in accordance with LCV <sup>4</sup>	%	
Flow temperature, constant	°C	
Return temperature, variable	°C	
Sound pressure level (based on surroundings)	dB(A)	
Fuels	gas	
Emissions (test data at full load)	CO < 150	mg/Nm <sup>3</sup>
	NOx, pond, HCV <sup>3,4</sup> < 240	mg/kWh
Dimensions, W x H x D	mm	
Footprint	m <sup>2</sup>	
Weight	kg	
Service interval (operating hours)	hours	

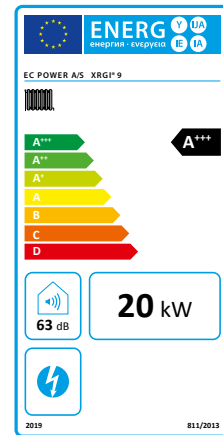
XRGI® 6 without condensing technology <sup>1</sup>		
Power Unit, iQ10-Control Panel, Q20-Heat Distributor		
A+++		
170 %		
50 %	75 %	100 %
3.0	4.5	6.0
8.1	10.1	12.4
24.8	28.5	30.1
67.6	64.5	62.3
92.4	93.0	92.4
~ 80		
5-70		
49		
natural gas (all qualities), propane, butane		
12		
230		
640 x 960 x 930		
0.59		
440		
10,000		

XRGI® 6 with condensing technology <sup>1</sup>		
Power Unit, iQ10-Control Panel, Q20-Heat Distributor + Condensing and exhaust gas heat exchanger BW4+		
		
198 %		
50 %	75 %	100 %
3.0	4.5	6.0
9.3	11.7	14.4
24.8	28.5	30.1
77.5	74.5	72.3
102.3	103.0	102.4
~ 80		
5-70		
49		
natural gas (all qualities), propane, butane		
13		
217		
640 x 960 x 930		
0.59		
440		
10,000		


\* 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> This values are based on independent, certified and authorised inspection bodies. Test reports are available upon request. <sup>3</sup> The values were rounded in accordance with the requirements governing product data sheets by Regulation (EU) No. 811/2013; 813/2013 <sup>4</sup> HCV = higher calorific value, LCV = lower calorific value


Deviations in values depend on the ambient and operating conditions, tolerance +/- 5 %. Subject to technical modifications, deviations from design and errors.

# XRGI® 9



XRGI® system		
Modules		
Seasonal space heating energy efficiency class <sup>2</sup>		
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>		
Power modulation*		
Electrical output, modulating*	kW	
Thermal output, modulating*	kW	
Electrical efficiency    in accordance with LCV <sup>4</sup>	%	
Thermal efficiency    in accordance with LCV <sup>4</sup>	%	
Total efficiency    in accordance with LCV <sup>4</sup>	%	
Flow temperature, constant	°C	
Return temperature, variable	°C	
Sound pressure level (based on surroundings)	dB(A)	
Fuels	gas	
Emissions (test data at full load)	CO < 70	mg/Nm <sup>3</sup>
	NOx, pond, HCV <sup>3,4</sup> < 240	mg/kWh
Dimensions, W x H x D	mm	
Footprint	m <sup>2</sup>	
Weight	kg	
Service interval (operating hours)	hours	

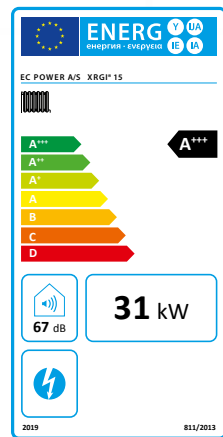
XRGI® 9 without condensing technology¹		
Power Unit, iQ10-Control Panel, Q20-Heat Distributor		
		
169 %		
50 %	75 %	100 %
4.5	6.8	9.0
12.4	15.7	20.1
25.4	28.5	29.3
70.1	66.5	65.6
95.5	95.1	94.9
~ 80		
5-70		
49		
natural gas (all qualities), propane, butane		
33		
25		
640 x 960 x 930		
0.59		
440		
10,000		

XRGI® 9 with condensing technology <sup>1</sup>		
Power Unit, iQ10-Control Panel, Q20-Heat Distributor + Condensing and exhaust gas heat exchanger BW4+		
		
199 %		
50 %	75 %	100 %
4.5	6.8	<b>9.0</b>
14.2	18.4	<b>23.3</b>
25.4	28.5	<b>29.4</b>
80.1	77.4	<b>76.5</b>
105.5	105.9	<b>105.9</b>
~ 80		
5-70		
49		
natural gas (all qualities), propane, butane		
31		
25		
640 x 960 x 930		
0.59		
440		
10,000		

\* 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> This values are based on independent, certified and authorised inspection bodies. Test reports are available upon request. <sup>3</sup> The values were rounded in accordance with the requirements governing product data sheets by Regulation (EU) No. 811/2013; 813/2013 <sup>4</sup> HCV = higher calorific value, LCV = lower calorific value

Deviations in values depend on the ambient and operating conditions, tolerance +/- 5 %. Subject to technical modifications, deviations from design and errors.

# XRGI<sup>®</sup> 15



XRGI <sup>®</sup> system		
Modules		
Seasonal space heating energy efficiency class <sup>2</sup>		
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>		
Power modulation*		
Electrical output, modulating*	kW	
Thermal output, modulating*	kW	
Electrical efficiency    in accordance with LCV <sup>4</sup>	%	
Thermal efficiency    in accordance with LCV <sup>4</sup>	%	
Total efficiency    in accordance with LCV <sup>4</sup>	%	
Flow temperature, constant	°C	
Return temperature, variable	°C	
Sound pressure level (based on surroundings)	dB(A)	
Fuels	gas	
Emissions (test data at full load)	CO < 150	mg/Nm <sup>3</sup>
	NOx, pond, HCV <sup>3,4</sup> < 240	mg/kWh
Dimensions, W x H x D	mm	
Footprint	m <sup>2</sup>	
Weight	kg	
Service interval (operating hours)	hours	

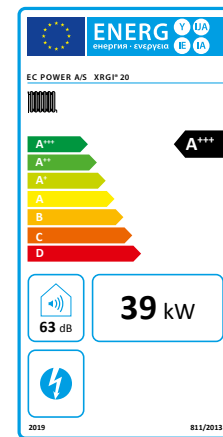
XRGI <sup>®</sup> 15 without condensing technology <sup>1</sup>			
Power Unit, iQ15-Control Panel, Q80-Heat Distributor			
Seasonal space heating energy efficiency class <sup>2</sup>			
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>			
50 %    75 %    100 %			
7.3    10.9 <b>14.5</b>			
21.4    26.5 <b>30.8</b>			
23.9    27.0 <b>29.5</b>			
69.8    65.4 <b>62.3</b>			
93.7    92.4 <b>91.8</b>			
~ 85			
5-75			
53			
natural gas (all qualities), propane, butane			
93			
209			
750 x 1,170 x 1,120			
0.84			
580			
8,500			

XRGI <sup>®</sup> 15 with condensing technology <sup>1</sup>			
Power Unit, iQ15-Control Panel, Q80-Heat Distributor + Condensing and exhaust gas heat exchanger BW8+			
Seasonal space heating energy efficiency class <sup>2</sup>			
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>			
50 %    75 %    100 %			
7.3    10.9 <b>14.5</b>			
24.8    31.4 <b>36.7</b>			
23.9    27.1 <b>29.3</b>			
81.3    77.9 <b>73.9</b>			
105.2    105.0 <b>103.2</b>			
~ 85			
5-75			
53			
natural gas (all qualities), propane, butane			
97			
184			
750 x 1,170 x 1,120			
0.84			
580			
8,500			

\* 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> This values are based on independent, certified and authorised inspection bodies. Test reports are available upon request. <sup>3</sup> The values were rounded in accordance with the requirements governing product data sheets by Regulation (EU) No. 811/2013; 813/2013 <sup>4</sup> HCV = higher calorific value, LCV = lower calorific value

Deviations in values depend on the ambient and operating conditions, tolerance +/- 5 %. Subject to technical modifications, deviations from design and errors.

# XRGI<sup>®</sup> 20



XRGI <sup>®</sup> system		
Modules		
Seasonal space heating energy efficiency class <sup>2</sup>		
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>		
Power modulation*		
Electrical output, modulating*	kW	
Thermal output, modulating*	kW	
Electrical efficiency    in accordance with LCV <sup>4</sup>	%	
Thermal efficiency    in accordance with LCV <sup>4</sup>	%	
Total efficiency    in accordance with LCV <sup>4</sup>	%	
Flow temperature, constant	°C	
Return temperature, variable	°C	
Sound pressure level (based on surroundings)	dB(A)	
Fuels	gas	
Emissions (test data at full load)	CO < 50	mg/Nm <sup>3</sup>
	NOx, pond, HCV <sup>3,4</sup> < 240	mg/kWh
Dimensions, W x H x D	mm	
Footprint	m <sup>2</sup>	
Weight	kg	
Service interval (operating hours)	hours	

XRGI <sup>®</sup> 20 without condensing technology <sup>1</sup>			
Power Unit, iQ20-Control Panel, Q80-Heat Distributor			
Seasonal space heating energy efficiency class <sup>2</sup>			
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>			
50 %    75 %    100 %			
10.0    15.0 <b>20.0</b>			
26.1    31.4 <b>38.7</b>			
26.9    31.1 <b>32.7</b>			
70.4    65.4 <b>63.4</b>			
97.3    96.5 <b>96.1</b>			
~ 85			
5-75			
49			
natural gas (all qualities), propane, butane			
15			
19			
750 x 1,170 x 1,120			
0.84			
680			
6,000			

XRGI <sup>®</sup> 20 with condensing technology <sup>1</sup>			
Power Unit, iQ20-Control Panel, Q80-Heat Distributor + Condensing and exhaust gas heat exchanger BW8+			
Seasonal space heating energy efficiency class <sup>2</sup>			
Seasonal space heating energy efficiency; HCV <sup>2,3,4</sup> η <sub>s</sub>			
50 %    75 %    100 %			
10.0    15.0 <b>20.0</b>			
29.3    35.9 <b>44.7</b>			
26.9    31.1 <b>32.7</b>			
78.8    74.6 <b>73.2</b>			
105.7    105.7 <b>105.9</b>			
~ 85			
5-75			
49			
natural gas (all qualities), propane, butane			
26			
10			
750 x 1,170 x 1,120			
0.84			
680			
6,000			

\* 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> This values are based on independent, certified and authorised inspection bodies. Test reports are available upon request. <sup>3</sup> The values were rounded in accordance with the requirements governing product data sheets by Regulation (EU) No. 811/2013; 813/2013 <sup>4</sup> HCV = higher calorific value, LCV = lower calorific value

Deviations in values depend on the ambient and operating conditions, tolerance +/- 5 %. Subject to technical modifications, deviations from design and errors.