Product Range

CHP-Systems

Heat Pump

Gas2Power

Service

Contents

Facts about 2G

Founded in
1995

Headquater
in **Heek**

38
Average age

Listed stock corporation

> 1.000 Employees

References

50 %
International sales share

CHP-Systems
20 kW to 4.500 kW

Heat pumps
88,9 kW to 3.200 kW

Hardware and software developers

15 Subsidiaries

Customers in
more than 60 countries
worldwide

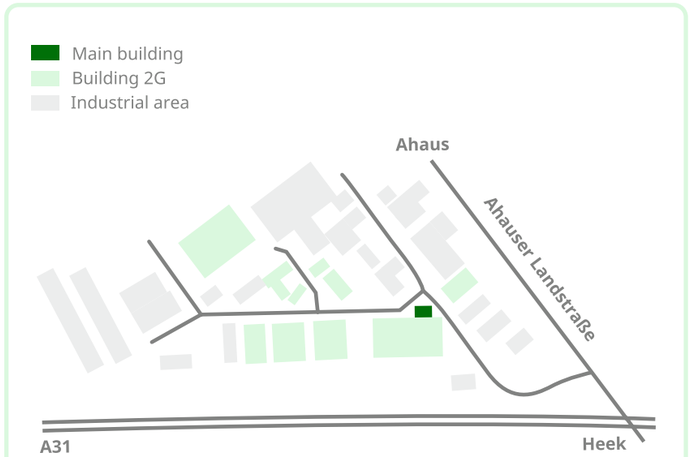
> 35
100% H2 CHP plants
worldwide

Worldwide
> 10.000
installed systems

Locations in Germany

2G Energietechnik GmbH
Benzstraße 3
48619 Heek

2G Energy International
Siemensstraße 26
48619 Heek



Branch North
Tempowerkring 1b
21079 Hamburg

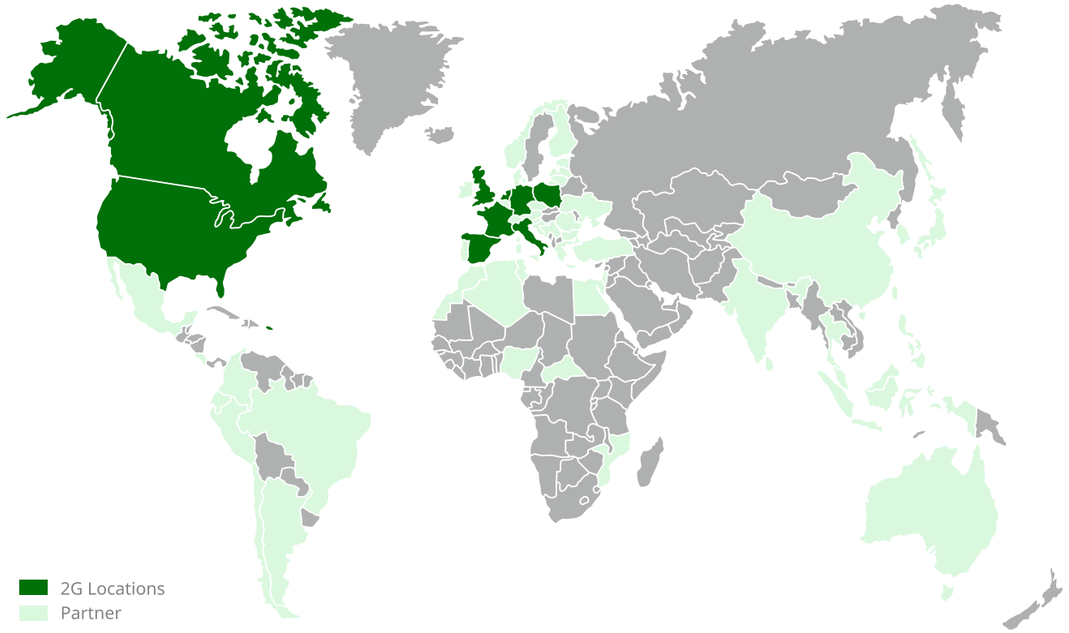
Branch East
Am Krümmling 1
06184 Kabelsketal

Branch South
Alpenstraße 33
83556 Griesstätt

2G Regional Mitte GmbH
Heini-Dittmar-Straße 8
97424 Schweinfurt

2G Rental GmbH
Oldenburger Allee 18
30659 Hannover

Locations and Partners



Our Products and Services

Products

CHP-Systems
20kW to 4.500kW

page 10

Heat Pumps
88.9kW to 3.200kW

page 22

Gas2Power
470kW to 620kW

page 30

Rental Solutions from 2G

10 YEARS
2G Rental

With our in-house rental models, we offer you the opportunity to benefit from highly efficient, decentralized energy technology without any investment.

» Flexible, predictable and economical.

Long-term rental model

With a rental model tailored to your individual needs, projects can be realized quickly and independently of banks, without requiring any investment. A fixed, predictable monthly rental rate is charged.

Short-term rental model

You have the option of renting a CHP plant for a short-term period, for example, or for test phases lasting from one month to four years. If necessary, the short-term rental can easily be converted into a long-term rental.

Accessories and Peripherals

Accessories and Peripherals

We offer field-tested accessories and peripheral systems for almost every application, drawing on our extensive experience. You can find our standard product range on our website.

Website

Digital Solutions

MY2G

MY2G platform

Ordering spare parts, managing documents, setting up interfaces to other systems – this and much more is made possible by the MY2G digital platform.

Further information on page 43

I.R.I.S

Intelligent fault prediction

Over 1,173,750,000 sensor readings are transmitted to our service every week from our installed systems around the world and evaluated – all completely automated. Based on this, the system detects and reports irregularities before they even occur.

For more information about our products and services, please visit our website

Everything from a Single Source

With 2G at your side, you can rely on a combination of cutting-edge technology and valuable expertise. From planning to implementation and maintenance, experienced experts are at your side at every stage. This allows you to continue to focus fully on your core business.

Conception

Planning
Project management

Development

In-house engine technology
In-house control system

Production

CHP-systems
Heat pumps
Gas2Power

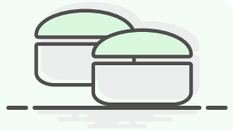
Installation

Commissioning
Plug and play container solutions

Service

Digital services
Intelligent outage prediction
Own shop

Which Customers already Benefit from our Expertise



Biogas plants

- Conventional biogas plants
- Wastewater treatment plants
- Landfill sites
- Waste recycling
- etc.

Industry

- Food industry
- Medicine | Pharmaceuticals
- Mechanical engineering
- etc.

Object-supply

- Healthcare (hospitals, etc.)
- Hotels
- Commercial
- Residential
- Greenhouses
- Educational institutions
- etc.

Energy supplier

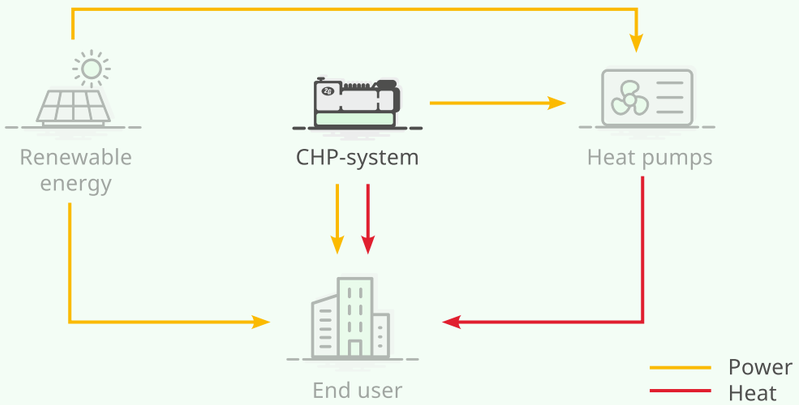
- Heating networks
- Microgrids
- Energy services
- etc.

CHP-Systems

CHP? Use energy correctly!

Combined heat and power (CHP) refers to the simultaneous generation of mechanical energy and useful heat. While the mechanical energy is directly converted into electricity, the heat can be used for heating, cooling, or steam generation.

The heat generated during electricity production does not simply escape unused into the atmosphere, but is put to good use. This is what makes combined heat and power technology so efficient and climate-friendly. Up to 40% of primary energy is saved. CO2 emissions are reduced by up to 60% compared to conventional electricity generation in large-scale power plants.



Our Portfolio

g-box
20kW$_{el}$ to 50kW$_{el}$

aura
100kW$_{el}$ to 420kW$_{el}$

agenitor
75kW$_{el}$ to 500kW$_{el}$

avus
548kW$_{el}$ to 4.500kW$_{el}$

Efficient operation
Reduces fuel costs through high efficiency gas engine

High reliability
Performs reliably even when operated with frequent starts and stops, thanks to highly wear resistant engine components

State-of-the-art technology
Our internal research and development team always drives innovation at 2G.

20kW or 4,500kW, natural gas or hydrogen, default, or custom configuration, it does not matter: As the technological leader of our sector, we always have the solution that fits your demands. Our dependable, powerful, and visionary combined heat and power systems are being used worldwide – and our internal R&D team continuously works on improving them. See for yourself.

Further information about our CHP systems can be found here

g-box

The current data can be found here:

Highly efficient and quiet, no more rising energy costs

The g-box is 2G's high performance small power plant with an electrical output range of 20 to 50kW. It is delivered as a ready-to-connect compact module. The control cabinet, with the PLC controller and operating unit, is installed as a separate unit on the module. The g-box is not only highly efficient but also very quiet thanks to its completely enclosed sound enclosure.

- Ready-to-connect, ultra-quiet compact module
- Highly economical thanks to high thermal efficiency thanks to condensing technology (standard)
- Long operating times, reliable, and low-maintenance
- Modular design allows for installation in tight spaces
- Completely water-cooled, eliminating the need for supply and exhaust air, reducing installation costs
- Robust and low-maintenance

g-box 20kW to 50kW

Type	Configu-ration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Natural gas	Natural gas	Natural gas	Natural gas	Natural gas
g-box 20	-	20kW	44kW	32,0%	70,4%	102,4%
g-box 50plus*	as70-4	50kW	104kW	34,6%	74,5%	109,1%
		Biogas	**Biogas**	**Biogas**	**Biogas**	**Biogas**
g-box 50plus	as135-1	50kW	77kW	32,8%	50,8%	83,7%
		LNG	**LNG**	**LNG**	**LNG**	**LNG**
g-box 20	as22-4	20kW	44kW	32,0%	70,4%	102,4%
g-box 50plus	as22-4	50kW	108kW	34,5%	71,8%	106,8%

* Also available as a HT version with a feed temperature up to 95 °C

aura

Based on the successful engine concept of the Agenitor 4 series, the Aura from 2G boasts outstanding efficiency characteristics.. Equipped with 2G's proprietary Lambda 1 technology and a low-pressure turbocharger, it also features extremely low exhaust emissions and, in particular, meets the increasing global requirements for low nitrogen oxide limits

- Low emissions
- High thermal efficiency
- Reliable, service-friendly engine concept
- 15% higher specific power compared to conventional systems with the same displacement
- Designed as a ready-to-connect compact module

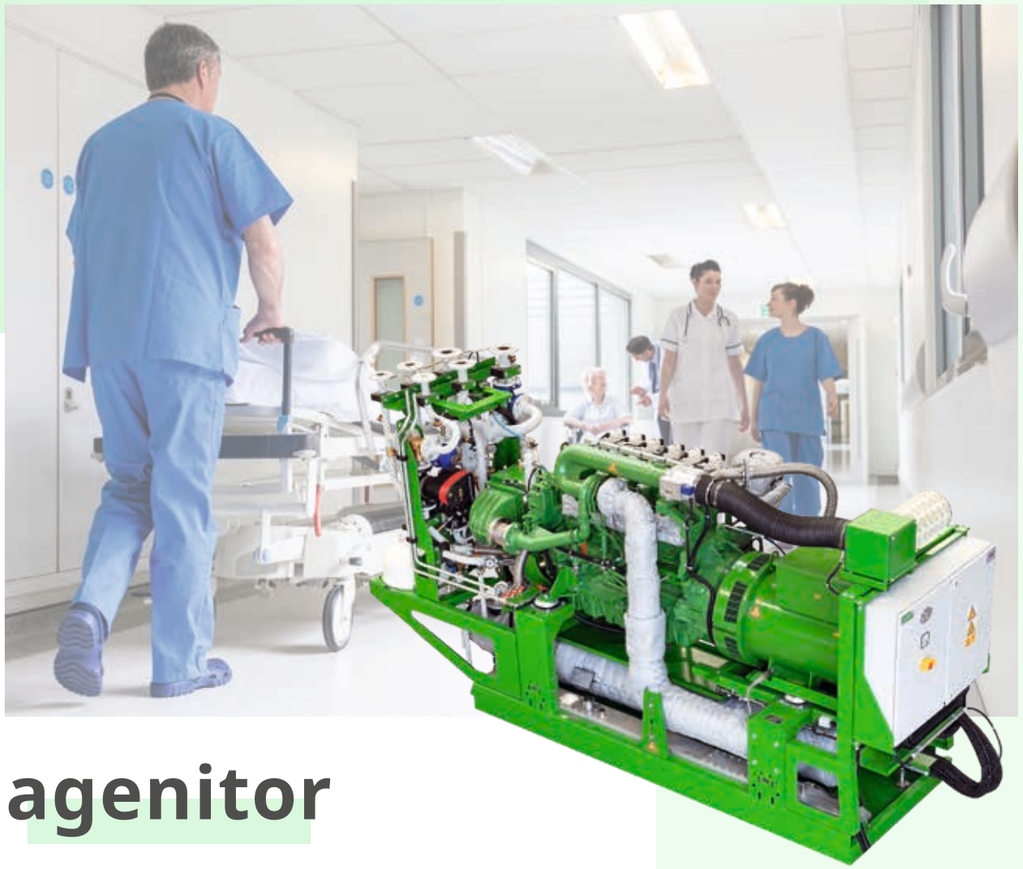
aura 100kW to 420kW

Type	Configu-ration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Natural gas	Natural gas	Natural gas	Natural gas	Natural gas
aura 404	ct70-4	100kW	176kW*	36,7%	61,1%	97,8%
aura 406	ct70-1	200kW	294kW**	37,7%	55,4%	93,0%
aura 408	ct70-1	280kW	404kW	38,5%	55,5%	94,0%
aura 412	ct70-1	420kW	605kW	38,6%	55,5%	94,1%

* For version: heat coupling with condensing heat exchanger
** other options available

The current data can be found here:

Maximum efficiency with minimal pollutant emissions



agenitor

The current data can be found here:

For maximum yield through reliable top performance

The agenitor from 2G is the result of extensive work by the 2G Energy development team. Thanks to an improved combustion chamber geometry, the efficiency of the agenitor series has been significantly increased.

- Designed as a ready-to-connect compact module
- Highly efficient power plant with optimized gas engine – therefore lower fuel costs
- Modular design facilitates installation in hard-to-reach locations
- Highly reliable, even with regular start-stop operation, thanks to highly wear-resistant engine components
- Robust and low-maintenance

agenitor 95kW to 500kW

Type	Configu-ration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Natural gas	Natural gas	Natural gas	Natural gas	Natural gas
agenitor 404	bt80-1 (MN70)	95kW	124kW	38,4%	49,9%	88,3%
	bt80-1	100kW	130kW	38,2%	49,6%	87,8%
	ct70-1	160kW	172kW	40,5%	43,5%	84,0%
	ct80-1	160kW	168kW	41,0%	43,0%	84,0%
	ct80-B-1	180kW	186kW	41,2%	42,5%	83,7%
agenitor 406	bt70-1	250kW	304kW	39,7%	48,3%	88,0%
	ct70-1	250kW	269kW	41,2%	44,2%	85,4%
	ct80-1	250kW	260kW	41,8%	43,5%	85,3%
	ct80-B-1	275kW	282kW	42,0%	43,0%	85,0%
agenitor 408	bt70-1	360kW	440kW	39,7%	48,5%	88,2%
	ct70-1	360kW	383kW	41,6%	44,2%	85,7%
	ct80-1	360kW	381kW	42,5%	45,0%	87,6%
	ct80-B-1	400kW	416kW	42,8%	44,5%	87,3%
agenitor 412	bt70-1	450kW	609kW	39,0%	52,8%	91,8%
	ct70-1	450kW	493kW	41,3%	45,3%	86,6%
	ct70-B-1	500kW	548kW	41,1%	45,0%	86,1%
		Biogas	Biogas	Biogas	Biogas	Biogas
agenitor 404	at135-1	80kW	104kW	37,3%	48,6%	85,9%
	bt135-1	100kW	119kW	38,6%	46,0%	84,6%
	ct135-1	160kW	155kW	41,5%	40,2%	81,7%
	ct135-B-1	180kW	161kW	41,7%	37,3%	79,0%
agenitor 406	ct135-B-1	275kW	260kW	42,5%	40,2%	82,8%
agenitor 408	ct135-B-1	400kW	373kW	42,8%	39,8%	82,6%
agenitor 412	ct135-B-1	500kW	482kW	41,9%	40,4%	82,3%

avus

The current data can be found here:

The powerful complete solution for industry and energy suppliers

The avus is a high-performance 2G power plant for high electrical power requirements (from 550 kW) that is used in larger industrial projects or to supply heat networks. Experienced 2G engineers familiar with large-scale engine technology can take over the complete planning and management of the entire project if required and provide professional support in the design of peripheral components.

- Complete solutions for industry: project planning, design of all components, communication with all on-site interfaces, piping, integration into containers or existing buildings
- Efficient operation and long service life thanks to excellent motor quality

avus 550kW to 4.500kW

Type	Configu-ration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Natural gas	Natural gas	Natural gas	Natural gas	Natural gas
avus 500plus	bt70-1	550kW	722kW	39,9%	52,3%	92,2%
	ct80-1	550kW	577kW	42,6%	44,7%	87,4%
	ct80-B-1	600kW	628kW	42,8%	44,8%	87,6%
avus 500a	F209 - F	599kW	609kW	43,3%	44,0%	87,3%
avus 500b	F05 - F	638kW	672kW	42,7%	45,0%	87,8%
avus 500c	-	600kW	622kW	43,2%	44,7%	87,9%
avus 800a	F05 - F	851kW	917kW	42,6%	45,9%	88,5%
avus 800b	C05 - F	962kW	952kW	43,5%	44,4%	87,9%
avus 800c	-	800kW	825kW	43,4%	44,7%	88,1%
avus 800e	L64 FNER	1.013kW	1.024kW	44,3%	44,8%	89,1%
avus 1000plus	ct80-1	1.000kW	1.000kW	43,7%	45,7%	89,4%
avus 1000a	F05 - F	1.067kW	1.067kW	42,7%	45,9%	88,6%
avus 1000b	C05- F	1.248kW	1.248kW	43,7%	44,3%	88,0%
avus 1000c	-	1.380kW	1.380kW	44,7%	42,5%	87,2%
avus 1200e	L64 FNER	1.521kW	1.521kW	44,2%	44,4%	88,6%
avus 1500b	E05 - F	1.561kW	1.561kW	43,7%	45,8%	89,5%
avus 1500c	-	1.840kW	1.840kW	44,7%	42,6%	87,3%
avus 1600e	L64 FNER	2.028kW	2.028kW	44,3%	44,8%	89,1%
avus 2000a	J01 - G	2.004kW	2.004kW	45,3%	43,0%	88,3%
avus 2000b	J01 - G	2.676kW	2.676kW	45,5%	42,9%	88,4%
avus 2000c	-	2.300kW	2.300kW	45,0%	42,3%	87,3%
avus 2000e	L64 FNER	2.538kW	2.538kW	43,9%	44,8%	88,7%
avus 3000a	J11 - G	3.360kW	3.360kW	45,6%	43,0%	88,6%

Type	Configu-ration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Biogas	Biogas	Biogas	Biogas	Biogas
avus 500a	F225	551kW	519kW	42,9%	40,3%	83,3%
avus 500 plus	ct135-1	550kW	526kW	42,5%	40,7%	83,2%
	ct165-B-1	600kW	569kW	42,8%	40,6%	83,5%
avus 500c	-	600 kW	598kW	42,1%	42,0%	84,1%
avus 500b	F25 - G	638 kW	640kW	42,0%	42,2%	84,2%
avus 800a	F25 - G	851kW	875kW	41,9%	43,1%	85,0%
avus 800b	C25 - F	934kW	904kW	43,2%	41,9%	85,1%
avus 800c	-	800kW	788kW	42,4%	41,8%	84,2%
avus 1000plus	ct135-0	1.000kW	945kW	43,6%	40,9%	84,5%
avus 1000a	F25 - G	1.067kW	1.093kW	42,0%	43,0%	85,0%
avus 1000b	C25 - F	1.248kW	1.224kW	43,1%	42,2%	85,3%
avus 1000c	-	1.380kW	1.319kW	43,1%	42,2%	85,3%
avus 1500b	C25 - F	1.561kW	1.537kW	43,3%	42,6%	85,9%
avus 1500c	-	1.840kW	1.759kW	43,3%	41,4%	84,7%
avus 2000c	-	2.000kW	1.982kW	42,6%	42,2%	84,8%

Hydrogen CHP

HYDROGEN PROVEN H_2

Ready for hydrogen when you are.

The use of hydrogen as an energy carrier is a milestone on the path to climate neutrality. H2 is the key technology that enables the flexible, safe, and physical use of renewable energy on a large scale.

Investing in a 2G CHP plant is more worthwhile than ever: As the only provider worldwide, we enable you to convert a natural gas or biogas-powered CHP plant to hydrogen operation – all as part of regular maintenance.

Only with 2G: Buy a CHP today, convert it to H2 tomorrow.

With **over 35 hydrogen projects on three continents**, we are actively shaping the future of sustainable energy – global, innovative, and forward-looking.

Click here to visit our project in Haßfurt:

agenitor H_2 115kW to 360kW

Type	Configu-ration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen
agenitor 404c H_2	ct0-0	115kW	128kW	37,7%	42,3%	80,0%
agenitor 406c H_2	ct0-0	170kW	182kW	39,0%	41,9%	80,9%
agenitor 408c H_2	ct0-0	240kW	250kW	40,2%	41,9%	82,1%
agenitor 412c H_2	ct0-0	360kW	372kW	40,4%	41,7%	82,1%

avus H_2 550kW to 4.500kW

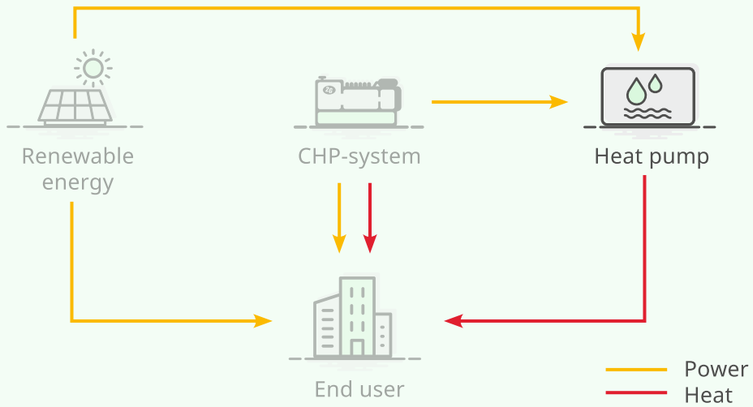
Type	Configu-ration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen
avus 1000plus	ct0-1	750kW	747kW	41,2%	41,0%	82,2%
avus 416plus	ct0-1	600kW	581kW	41,1%	39,8%	80,9%

afilia water series

Water-to-water heat pump

The heat pumps of the afilia series from 2G adapt fully automatically and very flexibly to the heat demand in the building or in the industrial process and deliver a constant temperature.

Even in single-stage versions, our water-to-water heat pumps can achieve temperature fluctuations of up to 70 K. Two-stage concepts are available for applications with higher temperature fluctuations – including project-specific solutions with flow temperatures from 95 °C to 120 °C.
All units are fully assembled, tested, and filled with refrigerant and oil at the factory. At the installation site, they only need to be positioned and connected to the hydraulic and power supply lines.



The current data can be found here:

Please note that our heat pumps with SG Ready interfaces are compatible with control units and smart meter gateways, thus meeting the legal requirements of the Energy Industry Act (Section 14a of the Energy Industry Act) and the Metering Point Operation Act (MsbG).

Our Portfolio

Highly efficient water-to-water heat pumps

afilia water C-B-r
104kW$_{th}$ to 380kW$_{th}$

afilia water C-E-sl
115kW$_{th}$ to 490kW$_{th}$

afilia water C-E-sc
150kW$_{th}$ to 1.006kW$_{th}$

afilia water C-S-r
697kW$_{th}$ to 2.230kW$_{th}$

afilia water C-G-r
1.510kW$_{th}$ to 3.192kW$_{th}$

afilia water customised
191kW$_{th}$ to 709kW$_{th}$

BAFA-eligible
afilia meets the minimum efficiency requirements and is SG-ready

Containerized solutions
in different sizes and variations

Integration of spot market optimization
Flexible operation and redispatch through partner

Intelligent failure prediction
in combination with the 2G AI „I.R.I.S.“

Convenient system management
Via my.2-g.com (monthly reports, operating range monitoring)

Comprehensive control
Ensured by master control

Comprehensive control concepts
Including auxiliary drives (pumps, mixers, data collection for heat source/sink)

afilia water C-B-r series R513A-VSD

Type	Heating output	COP	Power consumption	Source in/out	Depression in/out
C-80-B-r-6-L	104kW	2,72	37kW	10/5	60/80
C-80-B-r-6-2S	154kW	2,76	54kW	10/5	60/80
C-80-B-r-6-2L	207kW	2,69	75kW	10/5	60/80
C-80hts-B-r-6-L	192kW	3,78	49kW	30/25	60/80
C-80hts-B-r-6-2S	296kW	3,79	76kW	30/25	60/80
C-80hts-B-r-6-2L	380kW	3,75	99kW	30/25	60/80

GWP F-Gas-VO$_5$: 629

afilia water C-B-r series R1234ze -VSD

Type	Heating output	COP	Power consumption	Source in/out	Depression in/out
C-90-B-r-6-L	61,6 kW	2,4	25,6 kW	10/5	90/70
C-90-B-r-6-2S	94,8 kW	2,54	37,2 kW	10/5	90/70
C-90-B-r-6-2L	124 kW	2,39	51,7 kW	10/5	90/70
C-90hts-B-r-6-L	199 kW	3,92	50,8 kW	45/40	90/70
C-90hts-B-r-6-2S	304 kW	3,95	76,9 kW	45/40	90/70
C-90hts-B-r-6-2L	388 kW	3,88	100 kW	45/40	90/70

GWP F-Gas-VO$_5$: 1,37

afilia water C-E-sc series WHK-R1234ze

Type	Heating output	COP	Power consumption	Source in/out	Depression in/out
C-80-E-sc-151-WHKR1234ze	150kW	2,82	53,1kW	30/25	70/80
C-80-E-sc-201-WHKR1234ze	194,1kW	2,83	68,5kW	30/25	70/80
C-80-E-sc-251-WHKR1234ze	244kW	2,82	87,1kW	30/25	70/80
C-80-E-sc-301-WHKR1234ze	312kW	2,71	115,1kW	30/25	70/80
C-80-E-sc-401-WHKR1234ze	381kW	2,72	140,1kW	30/25	70/80
C-80-E-sc-501-WHKR1234ze	500kW	2,75	181,5kW	30/25	70/80
C-80-E-sc-601-WHKR1234ze	587kW	2,87	204,2kW	30/25	70/80
C-80-E-sc-702-WHKR1234ze	710kW	2,43	292,3kW	30/25	70/80
C-80-E-sc-802-WHKR1234ze	790kW	2,63	300kW	30/25	70/80
C-80-E-sc-902-WHKR1234ze	902kW	2,72	332,2kW	30/25	70/80
C-80-E-sc-1002-WHKR1234ze	1.006kW	2,63	382,2kW	30/25	70/80

GWP F-Gas-VO$_5$: 1,37

afilia water C-S-r series R717-VSD

Type	Heating output	COP	Power consumption	Source in/out	Depression in/out
C-90-S-r-16	1.319kW	4,42	315kW	40/35	65/90
C-90-S-r-12	1.045kW	4,42	237kW	40/35	65/90
C-90-S-r-08	697kW	4,42	158kW	40/35	65/90
C-70-S-r-16	2.230kW	5,27	423kW	30/25	50/70
C-70-S-r-12	1.673kW	5,27	317kW	30/25	50/70
C-70-S-r-08	1.114kW	5,28	211kW	30/25	50/70
C-50-S-r-16L	1.573kW	4,72	334kW	10/5	35/50
C-50-S-r-12L	1.180kW	4,73	250kW	10/5	35/50
C-50-S-r-08L	787kW	4,72	167kW	10/5	35/50

GWP F-Gas-VO$_5$: 0

afilia water C-G-r series R717-VSD

Type	Heating output	COP	Power consumption	Source in/out	Depression in/out
C-95-G-r-950	3.192kW	4,96	644kW	48/43	65/95
C-95-G-r-950	2.450kW	4,46	549kW	40/30	70/90
C-95-G-r-750	2.554kW	4,96	515kW	48/43	65/95
C-95-G-r-750	2.016kW	4,59	439kW	40/35	70/90
C-95-G-r-550	1.913kW	4,96	386kW	48/43	65/95
C-95-G-r-550	1.510kW	4,53	333kW	40/35	70/90

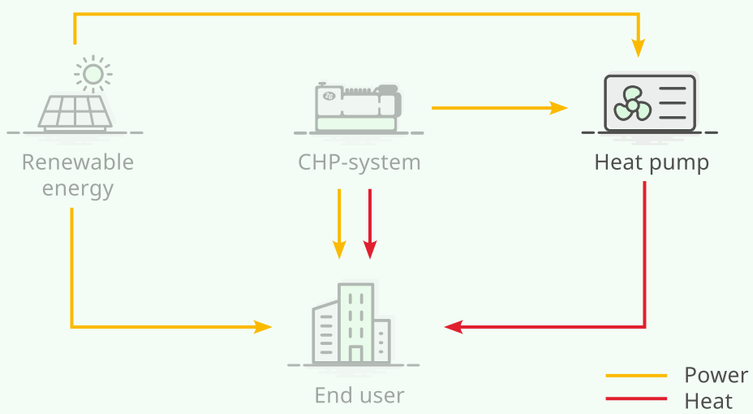
GWP F-Gas-VO$_5$: 0

afilia air series

air-to-water heat pump

The air-to-water heat pumps of the afilia air series are suitable for outdoor installation and are used for cooling and heating liquids in air conditioning applications or for ventilation units that operate in a particularly environmentally friendly manner due to the refrigerant used.

The units are designed for outdoor installation in accordance with the European standard EN 378 and its subsequent updates. Depending on the heat output, several versions are available, each with one or more compressors on one or two completely separate refrigerant circuits. Thanks to a wide range of accessories, the units can be customized to meet specific requirements. All units are fully factory-assembled, tested, and filled with refrigerant and oil. At the installation site, they only need to be positioned and connected to the hydraulic and power supply lines.



The current data can be found here:

Please note that our heat pumps with SG Ready interfaces are compatible with control units and smart meter gateways, thus meeting the legal requirements of the Energy Industry Act (Section 14a of the Energy Industry Act) and the Metering Point Operation Act (MsbG).

Our portfolio

Highly efficient air-to-water heat pumps

afilia air M-sl-AEK
89kW$_{th}$ to 888kW$_{th}$

afilia air M-sl-AEW
88kW$_{th}$ to 882kW$_{th}$
afilia air M-sl-PEK
87kW$_{th}$ to 866kW$_{th}$

afilia air C-sl HE/XL/RV P4U
133kW$_{th}$ to 416kW$_{th}$
afilia air C-sl HE/XL/RV P2U
132kW$_{th}$ to 415kW$_{th}$

afilia air C-r-ASK
123kW$_{th}$ to 344kW$_{th}$

BAFA-eligible
afilia meets the minimum efficiency requirements and is SG-ready

Low Noise solutions
with various accessories

Containerized solutions
in different sizes and variations

Integration of spot market optimization
Flexible operation and redispatch through partner

Intelligent failure prediction
in combination with the 2G AI „I.R.I.S.“

Convenient system management
Via my.2-g.com (monthly reports, operating range monitoring)

Comprehensive control
Ensured by master control

Comprehensive control concepts
Including auxiliary drives (pumps, mixers, data collection for heat source/sink)

afilia air M-sl-AEK-R290

Type	Heating output	COP	Power consumption	Water temperature in/out
AEK-R290-1	89kW	3,98	22kW	30/35
AEK-R290-2	178kW	3,95	45kW	30/35
AEK-R290-3	266kW	3,98	67kW	30/35
AEK-R290-4	355kW	3,98	89kW	30/35
AEK-R290-5	444kW	3,98	112kW	30/35
AEK-R290-6	533kW	3,98	134kW	30/35
AEK-R290-7	622kW	3,98	156kW	30/35
AEK-R290-8	710kW	3,98	178kW	30/35
AEK-R290-9	799kW	3,98	201kW	30/35
AEK-R290-10	888kW	3,98	223kW	30/35

GWP F-Gas-VO$_5$: 3

afilia air M-sl-AEW-R290

Type	Heating output	COP	Power consumption	Water temperature in/out
AEW-R290-1	88kW	3,92	23kW	30/35
AEW-R290-1	176kW	3,92	45kW	30/35
AEW-R290-1	265kW	3,92	68kW	30/35
AEW-R290-1	353kW	3,92	90kW	30/35
AEW-R290-1	441kW	3,92	113kW	30/35
AEW-R290-1	529kW	3,92	135kW	30/35
AEW-R290-1	617kW	3,92	158kW	30/35
AEW-R290-1	706kW	3,92	180kW	30/35
AEW-R290-1	794kW	3,92	203kW	30/35
AEW-R290-1	882kW	3,92	225kW	30/35

GWP F-Gas-VO$_5$: 3

afilia air M-sl-PEK-R290

Typ	Heating output	COP	Power consumption	Water temperature in/out
PEK-R290-1	87kW	3,88	22kW	30/35
PEK-R290-1	173kW	3,88	45kW	30/35
PEK-R290-1	260kW	3,88	67kW	30/35
PEK-R290-1	346kW	3,88	89kW	30/35
PEK-R290-1	433kW	3,88	112kW	30/35
PEK-R290-1	520kW	3,88	134kW	30/35
PEK-R290-1	606kW	3,88	156kW	30/35
PEK-R290-1	693kW	3,88	178kW	30/35
PEK-R290-1	779kW	3,88	201kW	30/35
PEK-R290-1	866kW	3,88	223kW	30/35

GWP F-Gas-VO$_5$: 3

afilia air C-sl P4U-R454B

Typ	Heating output	COP	Power consumption	Water temperature in/out
1352-HE/XL/RV-P4U-R454B	133kW	4,46	29,8kW	30/35
1502-HE/XL/RV-P4U-R454B	148kW	4,3	34,4kW	30/35
1612-HE/XL/RV-P4U-R454B	157kW	4,3	36,5kW	30/35
1792-HE/XL/RV-P4U-R454B	174kW	4,24	41kW	30/35
2012-HE/XL/RV-P4U-R454B	195kW	4,29	45,5kW	30/35
2304-HE/XL/RV-P4U-R454B	217kW	4,25	51,1kW	30/35
2312-HE/XL/RV-P4U-R454B	221kW	4,31	51,3kW	30/35
2654-HE/XL/RV-P4U-R454B	261kW	4,34	60,2kW	30/35
2954-HE/XL/RV-P4U-R454B	288kW	4,14	69,2kW	30/35
3214-HE/XL/RV-P4U-R454B	305kW	4,09	74,5kW	30/35
3514-HE/XL/RV-P4U-R454B	338kW	3,95	85,6kW	30/35
3954-HE/XL/RV-P4U-R454B	384kW	4,1	93,7kW	30/35
4454-HE/XL/RV-P4U-R454B	416kW	3,96	105kW	30/35

GWP F-Gas-VO$_5$: 465

afilia air C-sl P2U-R454B

Typ	Heating output	COP	Power consumption	Water temperature in/out
1352-HE/XL/RV-P2U-R454B	132kW	4,23	31,2kW	30/35
1502-HE/XL/RV-P2U-R454B	147kW	4,05	34,3kW	30/35
1612-HE/XL/RV-P2U-R454B	156kW	4,08	38,2kW	30/35
1792-HE/XL/RV-P2U-R454B	173kW	4,03	42,9kW	30/35
2012-HE/XL/RV-P2U-R454B	195kW	4,05	48,2kW	30/35
2304-HE/XL/RV-P2U-R454B	216kW	4,08	53kW	30/35
2312-HE/XL/RV-P2U-R454B	221kW	4,12	53,6kW	30/35
2654-HE/XL/RV-P2U-R454B	259kW	4,14	59,2kW	30/35
2954-HE/XL/RV-P2U-R454B	287kW	3,92	73,2kW	30/35
3214-HE/XL/RV-P2U-R454B	304kW	3,94	72,8kW	30/35
3514-HE/XL/RV-P2U-R454B	337kW	3,83	88,1kW	30/35
3954-HE/XL/RV-P2U-R454B	382kW	3,92	97,4kW	30/35
4454-HE/XL/RV-P2U-R454B	415kW	3,84	108kW	30/35

GWP F-Gas-VO$_5$: 465

Gas2Power (G2P) Solutions

Flexibility and security with 2G

With our 2G Gas2Power solutions, we offer customized solutions for a wide range of distributed energy supply requirements. Our systems are divided into four standardized operating modes: ESP, LTP, PRP, and COP. Each of these configurations meets different technical requirements and application scenarios – from reliable emergency power supply to continuous operation.

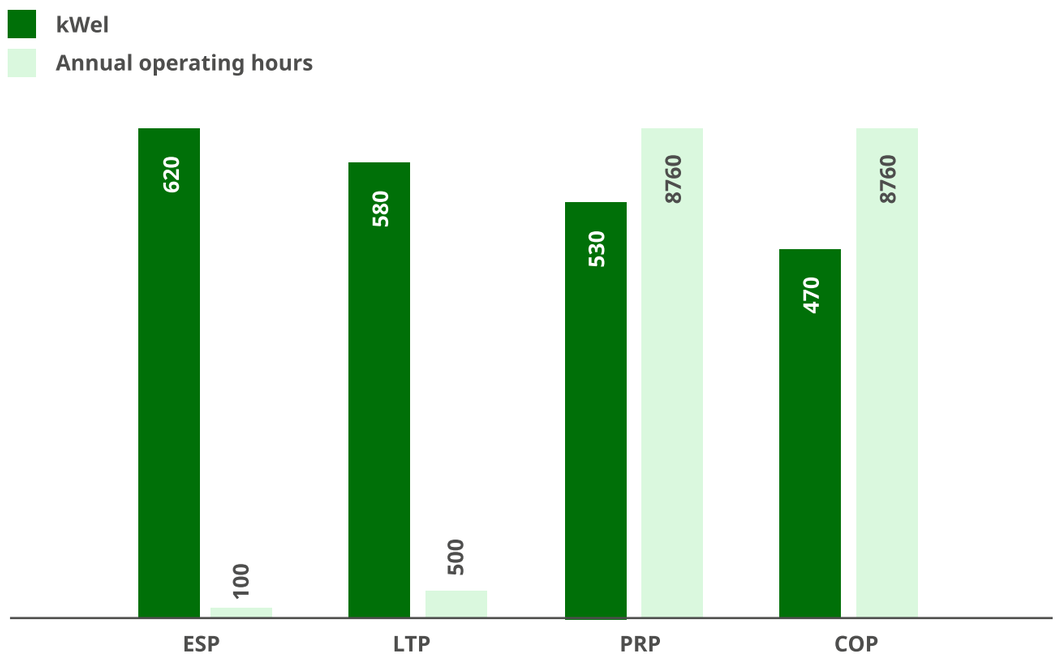
ESP (Emergency Standby Power) - Reliable in an emergency
Function: Emergency power supply in the event of a power failure
Special feature: Runtime up to 200 operating hours per year, 100% load step change in 10 sec
Areas of application: Hospitals, data centers, safety-relevant industrial sectors

LTP (Limited Time Power) - For targeted network support
Function: Grid stabilization and shutdown during peak loads
Special feature: Operating time up to 500 operating hours per year, no overload capacity
Areas of application: Industry, commerce, construction site supply

PRP (Prime Rated Power) - Flexibility for regular operations
Function: Regular continuous operation with variable load
Areas of application: Peak shaving / demand response

COP (Continuous Power) - Reliable base load supply
Function: Continuous operation under constant load
Special feature: 24/7 constant base load
Areas of application: Off-grid systems, continuous industrial loads

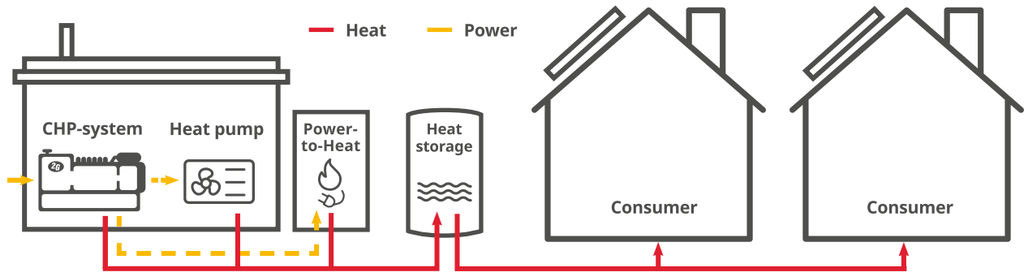
All operating modes according to ISO 8528



GreenCube

Turnkey energy centers for municipal heat planning

ENERGY CENTER



In order to effectively advance the heat transition, 2G offers the Green Cube, a turnkey energy center that, as the heart of decentralized heating networks, meets all the requirements of a sustainable energy solution.

CHP plants and heat pumps are often perceived as competing technologies. The opposite is true. Both our CHP plants and our heat pumps operate highly efficiently and are demand-oriented, making them natural partners for renewables. to A combination of CHP and heat pumps also increase the overall efficiency of the heating network.

CHP and heat pump in perfect harmony

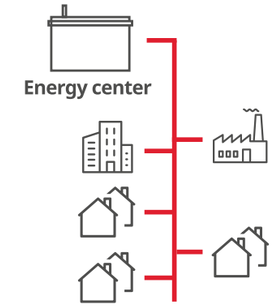
Cheaper heat price
By using on-site generation of electricity with CHP, combining with a heat pump can reduce heating prices by up to 44%.

Subsequently adaptable and expandable
The energy center is a modular container solution, allowing for easy subsequent system adaptations and expansions without interface issues.

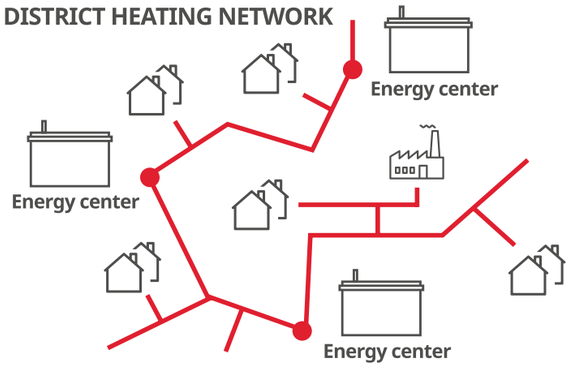
Renewable energy share
With a renewable energy share of 75%, the GreenCube makes a significant contribution to sustainable and climate-friendly energy supply.

Various heat sources possible
Thanks to the air-to-water heat pump, various heat sources can be tapped highly efficiently. If local conditions change, you can switch heat sources at any time. Operation with pure hydrogen is also already possible (H2-ready).

ENERGY CENTER



DISTRICT HEATING NETWORK



Data Center Solutions

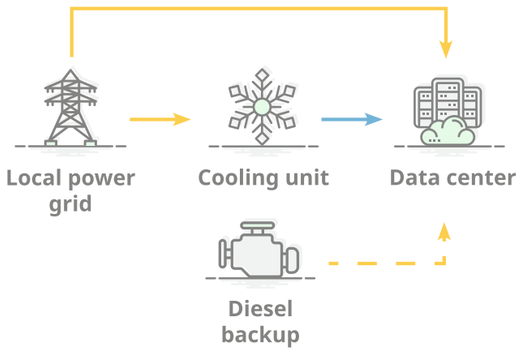
1MW to 200MW

The current data can be found here:

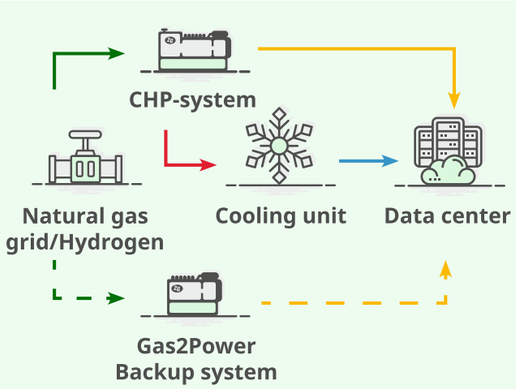
HYDROGEN PROVEN H_2

2G CHP concepts and Gas2Power solutions

A guaranteed power supply is a prerequisite for the safe and efficient operation of data centers. 2G CHP and Gas2Power concepts offer solutions that ensure energy autonomy, reliability, and sustainability even in the most complex situations.



Conventional power supply via the local grid



Secure decentralized electricity, heat and cooling supply

Plug and Play Container Solutions

Turnkey, ready-to-use, and tailored to your requirements

2G products offer a highly efficient way to reliably supply data centers with electricity, as well as heat or cooling. Our ready-to-connect container solutions integrate seamlessly into your environment and provide exactly the equipment needed for the energy-efficient operation of your data center. This enables the flexible, space-saving, and cost-effective implementation of modern energy concepts.

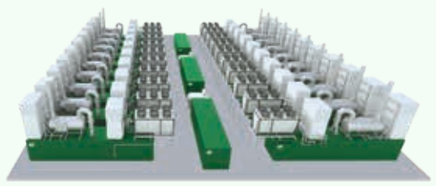
The following applies to all container solutions:

- **Turnkey and standardized**
- **Low noise emissions**
- **Fast delivery and installation**
- **Suitable for high ambient temperatures**
- **Low project risk**
- **Easy approval**

Stackable container solution

Module: avus 1000plus
Power: 1,035kW per container
Efficiency: up to 43.7% el
Noise emission: up to 55dB(A) at 10m
Stackable containers

Illustration (example):
45MW$_{el}$ | 55m x 14m



Standard container solution

Module: avus 2000
Power: ~2,500kW per container
Efficiency: up to 44.1% el
Noise emission: up to 58dB(A) at10 m
Standard container

Illustration (example):
50MW$_{el}$ | 45m x 45m

Other sizes available upon request

Installation Solutions

**Containerized and noise-reduced solutions.
Individually equipped and ready to connect upon delivery.**

2G power plants can be installed in a variety of ways, depending on the local conditions and sound insulation requirements. They can be integrated into existing buildings or heating plants, or installed separately in a container or suitable room. With the appropriate sound insulation package, noise emissions do not exceed 35 dB(A) at a distance of 10 m.

Container

Simple installation made possible by complete pre-assembly at factory and compact design, electric installation integrated.

Available for: aura, agenitor, avus 500plus
Noise emissions: 65|55dB, 65|52dB, 52|45dB

Basic concrete acoustic enclosure

Complete concrete enclosure of the CHP, 160 mm wall thickness, electric installation integrated.

Available for: aura, agenitor, avus 500plus
Noise emissions: 65|45dB, 65|35dB

Soundproof encapsulation

Encapsulation of the entire CHP with steel sheet elements, easily accessible through doors and maintenance hatches, 1.5 mm galvanized steel sheets on the outside, 1.0 mm galvanized perforated sheet metal on the inside.

Available for: individuell
Noise emissions: 65dB

Existing building

Bespoke installation inside existing buildings, project planning and configuration by 2G, often combined with soundproof encapsulation.

Available for: individual
Noise emissions: up to 35dB

Service

Quick and reliable. 24/7 worldwide

In person or digitally: The 2G Service makes sure that your CHP always operates reliably – and that you can focus on your core business

As a Full-Service provider, we always keep tabs on everything that matters to you. You do not have to take care of anything else. Our products and services originate from a single source and are therefore seamlessly integrated – which saves time and money, thus providing a low total cost of ownership.

At 2G, we believe that it should be as easy as possible to operate your own CHP. We minimise downtimes, and other irregularities. Therefore, we offer you way more than only a modern combined heat and power system.
We, as the manufacturer, want to relieve you as an operator and sustainably maximize the availability of your system - and your satisfaction with our product in turn.

Service-Facts

>150
Customer-oriented service technicians in Germany

>1.000
Technicians in the network **worldwide**

>200
Service partners worldwide

Certified Service Partner of Jenbacher, MWM, MTU, MAN, Liebherr

Excellent **parts availability from all manufacturers**

24/7
Service hotline

6.000m²
Service central warehouse

Intelligent flow prediction
in conjunction with the 2G AI „I.R.I.S.“

AT engines and **AT generators** available within

24h

(within Germany)

Remote commissioning through VR

>75%

of error messages are **resolved remotely**

Services and Service Products

With our technical components, you have the option of operating your CHP plant in compliance with legal requirements at all times, effectively preventing signs of wear and tear, and thus ultimately increasing the overall efficiency of your system. Upon request, 2G will keep track of all measurement intervals, limit values, and documentation requirements for you, so you can focus on important matters.

Manufacturer independent

Products	Services
Spare parts	Plant service
2G Premium Parts	System check
Catalysts | SCR systems	Emissions measurement (FA)
Replacement and new engines	DGUV test
Replacement and new generators	Engine repair
Gas compressor	Generator maintenance
Lubricating oil	Emergency radiator cleaning
Activated carbon	Control conversion
Glysantin	Plate heat exchanger replacement
	Exhaust gas heat exchanger cleaning
	System conversions and upgrades to 2G technology
	Rebuilds in situ

Network of service technicians

We can draw on a vast network of highly trained specialists who, as service technicians, can be at your location in no time and ensure the smooth operation of your system. Our fleet of service vehicles is equipped with everything that is required to analyze, maintain, and repair a CHP.

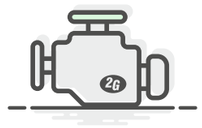
Original spare parts

We exclusively use original 2G spare parts or spare parts of renowned manufacturers. This way, we can guarantee that the elevated quality, operational safety, and efficiency of your 2G system are preserved. Thanks to a well-organized, central spare parts depot and state-of-the-art logistics, the rapid availability of your spare parts is guaranteed.

Premium service contract

All servicing and maintenance at a fixed price: The Premium Service Contract guarantees you absolute certainty with regards to planning and expenses.

Remanufacturing program ReFit-Center



For the development and equipment of its products, 2G strictly relies on durable materials. Many of the components we use can therefore be reused beyond their initial life cycle – often even more than once.

For you, that means you get the same quality for less money.

2G TrainingCenter

Practical knowledge. Directly from the manufacturer

As one of the leading manufacturers of combined heat and power systems with an internal research and development department, 2G Energy constantly works towards perfecting cogeneration system technology.
No matter if you are a customer, operator, or partner: you can benefit from the most recent technology development and practical experiences made directly by the manufacturer. We offer user-specific Sales and Service training for our complete product range, either at the 2G TrainingCenter in Heek (Germany), at one of our international locations or, upon request, directly at your location.

Many of the courses we offer are composed in-person and digital training. In these cases, the online training is required for in-person session. This process balances the theoretical knowledge among participants which leads to a deeper and more efficient in-person learning experience.

MY2G

Your central platform for intelligent asset management

MY2G is your central platform for intelligent asset management. It combines cutting-edge AI support and personalized service options to personalize your asset management. With MY2G, you have access to data, services, and tools from anywhere, anytime. Take the first step toward digitally optimized asset management for free.

About the platform:
my.2-g.com

Plant monitoring
Access to operating states and performance data

Documents ready to hand
Easy download of operating manuals, maintenance reports, software, and other relevant documents

MY2G Store
The right solutions for your systems can be easily booked online.

Artificial intelligence
Fast answers and assistance from our AI-based virtual assistant I.R.I.S.

Online service ordering
Exclusively in Germany: Request and track service calls directly via the platform

Would you like to generate your own electricity and heat in the future and sustainably reduce your energy costs? Whether with highly efficient heat pumps or through the use of modern cogeneration systems – we offer you customized solutions for an economical and environmentally friendly energy supply.
Contact us – we would be happy to advise you!

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