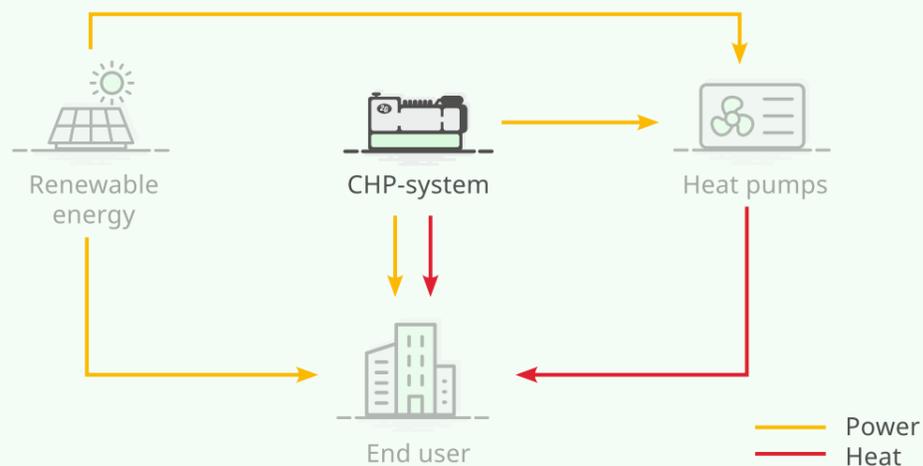


CHP-Systems

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
135kW_{el} to 420kW_{el}



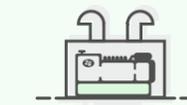
agenitor
80kW_{el} to 500kW_{el}



avus
550kW_{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**

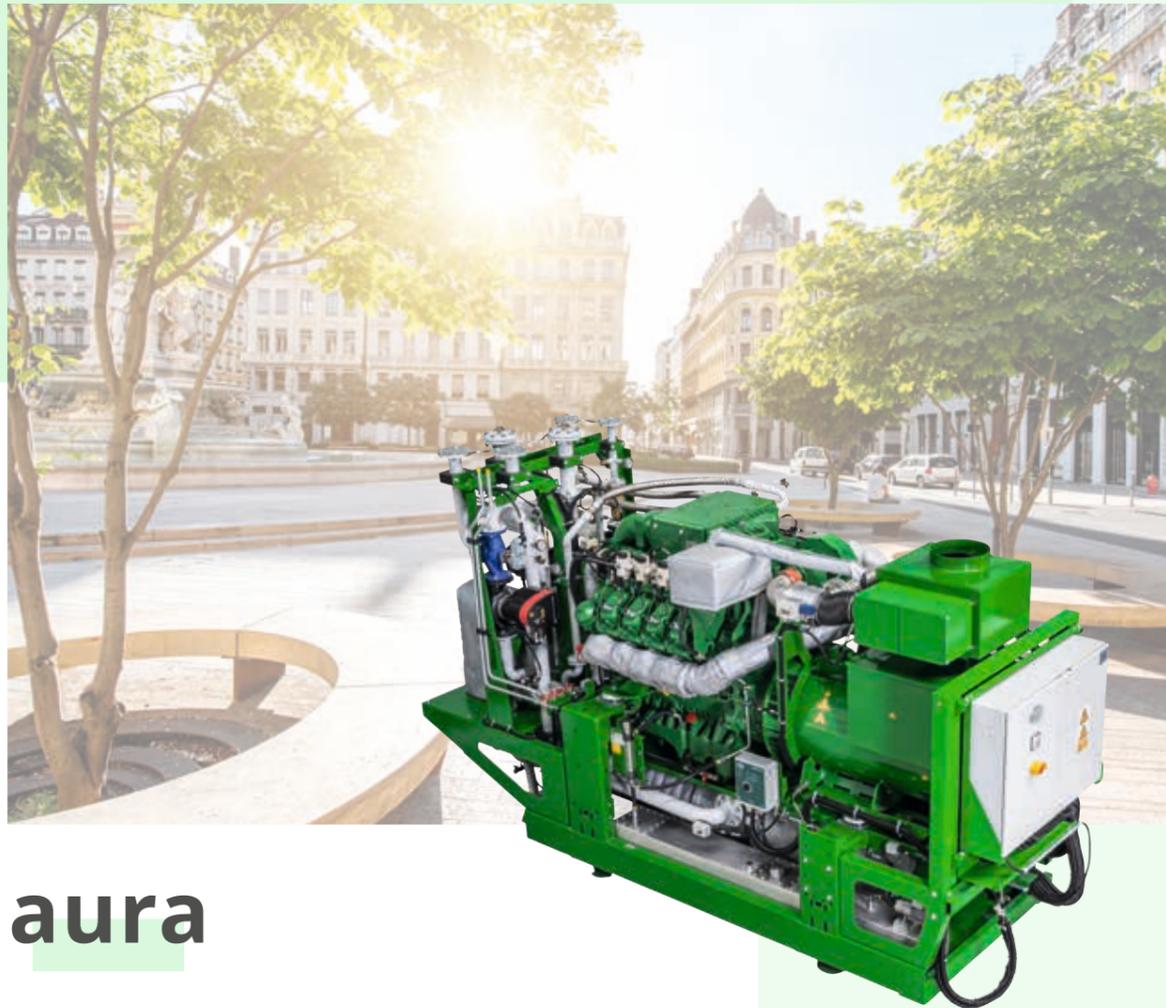
The g-box is 2G's high performance small power plant with an electrical output range of 20 to 50kW. It is delivered as a ready-to-connect compact module. The control cabinet, with the PLC controller and operating unit, is installed as a separate unit on the module. The g-box is not only highly efficient 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	as22-4	20kW	44kW	32.0%	70.8%	102.8%
g-box 50plus*	as22-4	50kW	108kW	33.7%	72.7%	106.4%
		Biogas	Biogas	Biogas	Biogas	Biogas
g-box 50plus	asl135-1	50kW	79kW	34.9%	54.8%	89.6%
g-box 50plus	asr135-1	50kW	77kW	32.8%	50.8%	83.7%

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



aura

The current data can be found here:



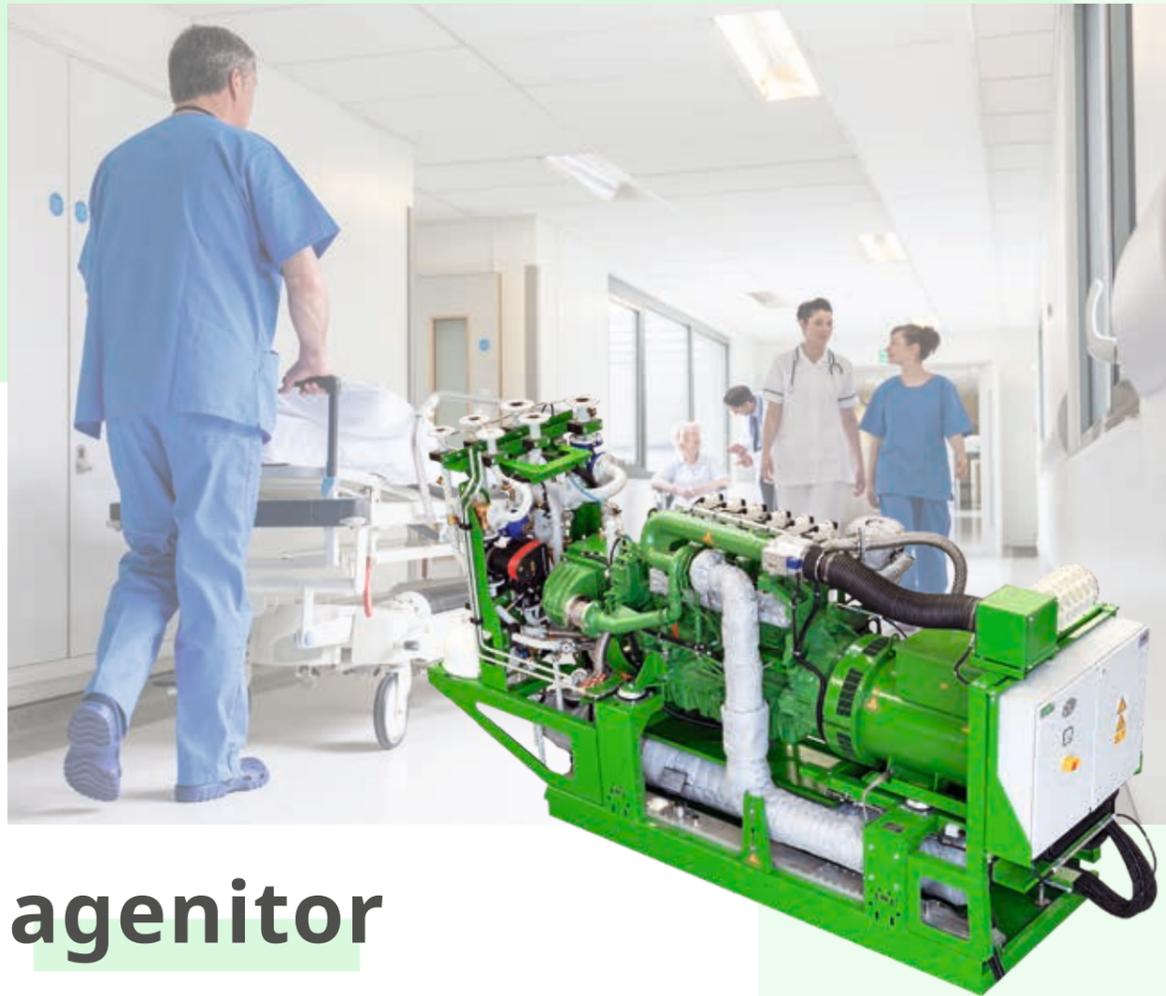
Maximum efficiency with minimal pollutant emissions

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 135kW 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	bt70-B-0	135kW	211kW	37.0%	58.1%	95.1%
aura 406	bt70-B-0	200kW	295kW	37.6%	55.5%	93.1%
aura 408	bt70-0	280kW	408kW	38.4%	55.9%	94.3%
aura 412	bt70-0	420kW	615kW	38.5%	56.3%	94.8%



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 80kW 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	bt80-0	100kW	128kW	38.4%	49.9%	87.6%
	ct80-B-0	180kW	186kW	41.2%	42.5%	83.7%
agenitor 406	bt70-0	250kW	315kW	39.7%	50.0%	89.7%
	ct80-B-0	275kW	282kW	42.0%	43.0%	85.1%
agenitor 408	bt70-B-0	360kW	459kW	39.6%	50.5%	90.1%
	ct80-B-0	400kW	416kW	42.8%	44.5%	87.2%
agenitor 412	bt70-B-0	450kW	580kW	39.1%	50.5%	89.6%
	ct80-B-0	500kW	537kW	41.6%	44.6%	86.2%
		Biogas	Biogas	Biogas	Biogas	Biogas
agenitor 404	at135-0	80kW	103 kW	37.3%	48.1%	85.4%
	bt135-0	100kW	117kW	38.6%	45.4%	84.0%
	ct135-B-0	180kW	172kW	41.7%	39.9%	81.6%
agenitor 406	ct135-B-0	275kW	260kW	42.5%	40.2%	82.8%
agenitor 408	ct135-B-0	400kW	373kW	42.8%	39.8%	82.6%
agenitor 412	ct135-B-0	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	Configuration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Natural gas	Natural gas	Natural gas	Natural gas	Natural gas
avus 500plus	bt70-B-0	550kW	703kW	39.7%	50.8%	90.5%
	ct80-B-0	600kW	628kW	42.8%	44.8%	87.6%
avus 416plus	ct70-0	800kW	804kW	42.8%	43.0%	85.8%
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	1,012kW	1,084kW	43.5%	46.5%	90.0%
avus 1000plus	ct80-1	1,035kW	1,052kW	43.8%	44.5%	88.3%
avus 1000a	F05 - F	1,067kW	1,146kW	42.7%	45.9%	88.6%
avus 1000b	C05- F	1,248kW	1,268kW	43.7%	44.3%	88.0%
avus 1000c	-	1,380kW	1,313kW	44.7%	42.5%	87.2%
avus 1200e	L64 FNER	1,521kW	1,566kW	44.4%	45.7%	90.1%
avus 1500b	E05 - F	1,561kW	1,637kW	43.7%	45.8%	89.5%
avus 1500c	-	1,840kW	1,756kW	44.7%	42.6%	87.3%
avus 1600e	L64 FNER	2,028kW	2,174kW	43.9%	46.4%	90.3%
avus 2000a	J01 - G	2,004kW	1,904kW	45.3%	43.0%	88.3%
avus 2000b	J01 - G	2,676kW	2,527kW	45.5%	42.9%	88.4%
avus 2000c	-	2,300kW	2,164kW	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	3,172kW	45.6%	43.0%	88.6%

Type	Configuration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Biogas	Biogas	Biogas	Biogas	Biogas
avus 500 plus	ct135-B-0	600kW	569kW	42.8%	40.6%	83.5%
avus 416 plus	ct135-0	800kW	759kW	43.0%	40.8%	83.8%
avus 500a	F225	551kW	519kW	42.9%	40.3%	83.3%
avus 500b	F25 - G	638 kW	640kW	42.0%	42.2%	84.2%
avus 500c	-	600kW	598kW	42.1%	42.0%	84.1%
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 800e	L64FB	1,013kW	1,005kW	43.1%	42.8%	85.9%
avus 1000plus	ct135-0	1,035kW	966kW	43.7%	40.8%	84.4%
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	43.3%	41.4%	84.7%
avus 1200e	L64 FB	1,521kW	1,434kW	44.1%	41.7%	85.8%
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 1600e	L64 FB	2,028kW	1,969kW	43.7%	42.4%	86.1%
avus 2000c	-	2,000kW	1,982kW	42.6%	42.2%	84.8%
avus 2000e	L64 FB	2,539kW	2,709kW	43.7%	46.6%	90.3%

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:

Hydrogen CHP



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.

agenitor H₂ 115kW to 360kW

Type	Configuration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Wasserstoff	Wasserstoff	Wasserstoff	Wasserstoff	Wasserstoff
agenitor 404c H ₂	ct0-0	115kW	116kW	37.8%	38.0%	75.8%
agenitor 406c H ₂	ct0-0	170kW	159kW	40.1%	37.5%	77.6%
agenitor 408c H ₂	ct0-0	240kW	231kW	40.8%	39.3%	80.1%
agenitor 412c H ₂	ct0-0	360kW	336kW	40.6%	37.9%	78.5%

avus H₂ 600kW to 750kW

Type	Configuration	Electrical output	Thermal output	Electrical efficiency	Thermal efficiency	Overall efficiency
		Wasserstoff	Wasserstoff	Wasserstoff	Wasserstoff	Wasserstoff
avus 1000plus	ct0-1	750kW	735kW	42.1%	41.2%	83.3%
avus 416plus	ct0-1	600kW	602kW	42.0%	42.1%	84.2%