



**Biogas**

**CHP modules | up to 2,000 kW**



**Biogas CHP**  
**Energy with added value**  
Top efficiency through innovative technologies

**agenitor**<sup>®</sup>  
Top efficiency!



# Forward-looking technologies



## Climate-friendly and efficient

Biogas is one of the most successful renewable energy carriers worldwide. It can be used to produce electricity and at the same time useful heat through cogeneration in an efficient and environment-friendly system. Over the coming years experts expect the number of new biogas plants to grow further. In Germany more than 5 million homes and companies are already supplied with climate-friendly electricity from biogas.

## A strong partner

2G CHP plants for biogas have been tried and tested for years. 2G sets standards as a technology leader in the sector – thousands of satisfied customers appreciate the reliability and high efficiency of the 2G modules, which offer cost-effectiveness and high availability of up to 95%.



## Your benefits

- Reduced energy costs and emissions
- Top efficiency through innovative technologies
- Climate-friendly electricity and heat generation
- Independence from the energy market



Cogeneration



## Top efficiency

2G technologies are characterised by brilliant unique position characteristics. The **agenitor** series (200 to 500 kW) is currently undoubtedly the market leader when it comes to efficiency. Operators benefit from higher yields: They can feed more electricity into the grid and achieve higher revenue.

The **agenitor** series evolved through intensive research involving internationally recognised gas engine experts. The modified combustion chamber geometry and the shifted operating point of the exhaust turbo charger are protected by patents. However, 2G does not rest on its laurels. The subsidiary 2G Drives GmbH was founded with a specific remit to develop the 2G modules further. It employs specialists who work on this mission on a daily basis.

## CHP for small biogas plants

Another innovation from 2G is the new 75 kW module for small biogas plants: the **filius R04**. The module was optimised for the modified requirements of the 2012 German Renewable Energies Act and guarantees top feed-in tariffs for the operator. From a technical perspective the **filius R04** clearly has the edge over other CHP systems in its class through higher efficiency, reduced maintenance effort and longer service intervals. The module has an optimised mixture formation unit and an advanced Otto gas engine and operates without OxiKAT, gas cooling system and activated carbon filter.



# Efficient solutions



filiUS<sup>®</sup> series



2G-KWK series



agenitor<sup>®</sup> series



avus<sup>®</sup> series

## Biogas CHP up to 2,000 kW\*

Type	Electrical capacity	Thermal capacity	Electrical efficiency	Thermal efficiency
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filiUS <sup>®</sup> 104	50 kW	70 kW	35.3%	49.8%
filiUS <sup>®</sup> 204	64 kW	85 kW	36.1%	48.0%
filiUS <sup>®</sup> R04	75 kW	89 kW	38.0%	43.1%
filiUS <sup>®</sup> 106	100 kW	121 kW	38.0%	45.8%
filiUS <sup>®</sup> 206	150 kW	179 kW	38.2%	45.6%
2G-KWK-190 BG	190 kW	218 kW	38.7%	44.4%
2G-KWK-250 BG	250 kW	290 kW	38.8%	45.0%
2G-KWK-370 BG	370 kW	431 kW	38.8%	45.2%

agenitor <sup>®</sup> 206	220 kW	232 kW	40.6%	42.8%
agenitor <sup>®</sup> 306	250 kW	265 kW	41.0%	43.5%
agenitor <sup>®</sup> 212	400 kW	445 kW	40.1%	44.6%
agenitor <sup>®</sup> 312	450 kW	469 kW	40.6%	42.3%
agenitor <sup>®</sup> 406	250 kW	250 kW	42.5%	42.5%
agenitor <sup>®</sup> 408	360 kW	354 kW	42.5%	41.8%
TWIN-PACK 500	500 kW	500 kW	42.5%	42.5%

avus <sup>®</sup> 500a	527 kW	558 kW	40.5%	42.9%
avus <sup>®</sup> 500 plus	550 kW	541 kW	42.5%	41.8%
avus <sup>®</sup> 500b	637 kW	675 kW	40.4%	42.8%
avus <sup>®</sup> 500c	600 kW	604 kW	41.6%	41.9%
avus <sup>®</sup> 800a	835 kW	920 kW	39.9%	44.0%
avus <sup>®</sup> 800b	845 kW	814 kW	42.7%	41.1%
avus <sup>®</sup> 800c	800 kW	803 kW	41.7%	41.8%
avus <sup>®</sup> 1000a	1067 kW	1103 kW	40.9%	42.3%
avus <sup>®</sup> 1000b	1130 kW	1086 kW	42.8%	41.1%
avus <sup>®</sup> 1000c	1200 kW	1271 kW	41.3%	43.7%
avus <sup>®</sup> 1500b	1413 kW	1358 kW	42.8%	41.1%
avus <sup>®</sup> 1500c	1560 kW	1678 kW	40.9%	43.9%
avus <sup>®</sup> 2000c	2000 kW	2116 kW	41.2%	43.6%

Subject to technical modifications.  
\* modules with higher capacity available on request.



## Maximum energy yield

2G offers field-proven integrated solutions for efficient biogas utilisation. Our services include planning, delivery and commissioning of the CHP plant and all components for electricity and heat generation. In addition, our specialists design and implement the complete control technology for your 2G module, including visualisation and data archiving. The data can be used for analysing the plant efficiency and for optimising the control parameters.

## Prepared for all eventualities

Should a module fail due to an engine malfunction or have to be shut down for repairs, we can come to rescue with a hire CHP unit from the latest 2G generation.



Installation with or without acoustic enclosure (up to 550 kW)



Acoustic enclosure (concrete construction)



## Versatile

We analyse your heat demand and advise on the right CHP system for your situation. 2G modules are used in a wide range of applications:

- Agriculture
- Waste treatment plants
- Landfill sites and sewage works
- Slurry operations



Containerised CHP, ready for connection

# Top customer care



## Top availability

In order to ensure that your 2G module keeps running with high efficiency, it is important to inspect and service the engines and the control equipment on a regular basis. With a system availability of more than 95% 2G is setting standards in the sector. Qualified service technicians and an extensive spare parts depot are the basis for our professional maintenance service.

## Customised service

2G offers a modular maintenance concept that can be adapted to your requirements. It focuses on:

- maximum availability and efficiency
- planning reliability
- cost control



## Top customer service

Our service team is there for you at any time. We respond to your queries and offer fast and efficient assistance.

**Service hotline: +49 (0) 1803 222 003**



## Maintenance without shutdown

For maintenance and repair work we use state-of-the-art measuring and control systems such as video endoscopy. They enable us to examine engine components without the need to dismantle the engine, so that downtimes can be reduced to a minimum. Should a module fail or have to be switched off, we can provide a ready-to-use hire CHP unit in order to ensure continued generation. As a special service we offer all operators of 2G plants a web-based monitoring and control option. It enables our customers to check from their smartphone or PC whether their system is OK or when the next service is due.

## Closer to our customers

2G has a comprehensive sales and service network. Should a malfunction occur in your system, our service engineers can quickly diagnose the problem remotely on their computer and send out a 2G service technician, if required. Our "rolling 2G service stations" are available for on-site troubleshooting.



## Ideal conditions

- Comprehensive service network
- Extensive spare parts depot
- State-of-the-art hire CHP option
- Modular maintenance concept



## About 2G

A 2G module is the ideal solution for operators who want to reduce their energy costs in the long term and protect themselves from further increases in electricity prices. We are the leading provider of decentralised combined heat and power systems. With our co-generation plants we specialise in high-efficiency systems for natural gas and biogas. We offer excellent customer care for clients worldwide, who are impressed with our products. They confirm the quality and performance of our systems and are the basis of our international success.

## 2G Biogas CHP

**Would you like to find out more?** Visit our website at [www.2-g.com](http://www.2-g.com) or talk to one of our experts.

## Presales:

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