

BIOGAS-CHP

Efficient. Reliable. Flexible.

-  **PLANTS**
Efficient. Innovative. Sustainable.
-  **COMPONENTS**
Proven. Robust. Reliable.
-  **UTILISATION**
CHP. Biomethane. Digestate.
-  **SERVICES**
Support. Advice. Expertise.



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Member of the
German Biogas
Association



aK CHP INTL
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bestore
. Group

agriKomp GmbH:
Certified acc.
to ISO 9001



Follow us on:



CHP. Made by agriKomp.
Efficient. Reliable.
Flexible.

POWERFUL PERFORMANCE
- HIGHEST RELIABILITY

Combined heat and power units (CHP), with their versatile applications, currently represent an economical and efficient climate protection technology. All CHP units work according to the principle of combined heat and power (CHP), a decentralised generation of electricity and heat available directly on site where it is consumed.

agriKomp offers you customised energy concepts for CHP applications. We develop optimised CHP units with modern engine technology from renowned manufacturers, such as SCANIA, in the small and medium power range.

Our CHP units are characterised by their robustness and reliability. This results in low maintenance costs that are unparalleled in the industry.

AVAILABLE
PRODUCTS

- ✓ BGA 095 ETA / 55 kW_{el} – 180 kW_{el}
- ✓ BGA 136 ETA / 150 kW_{el} – 265 kW_{el}
- ✓ BGA 168 ETA / 260 kW_{el} – 350 kW_{el}
- ✓ BGA 252 / 350 kW_{el} – 530 kW_{el}
- ✓ agriClean gas pre-treatment

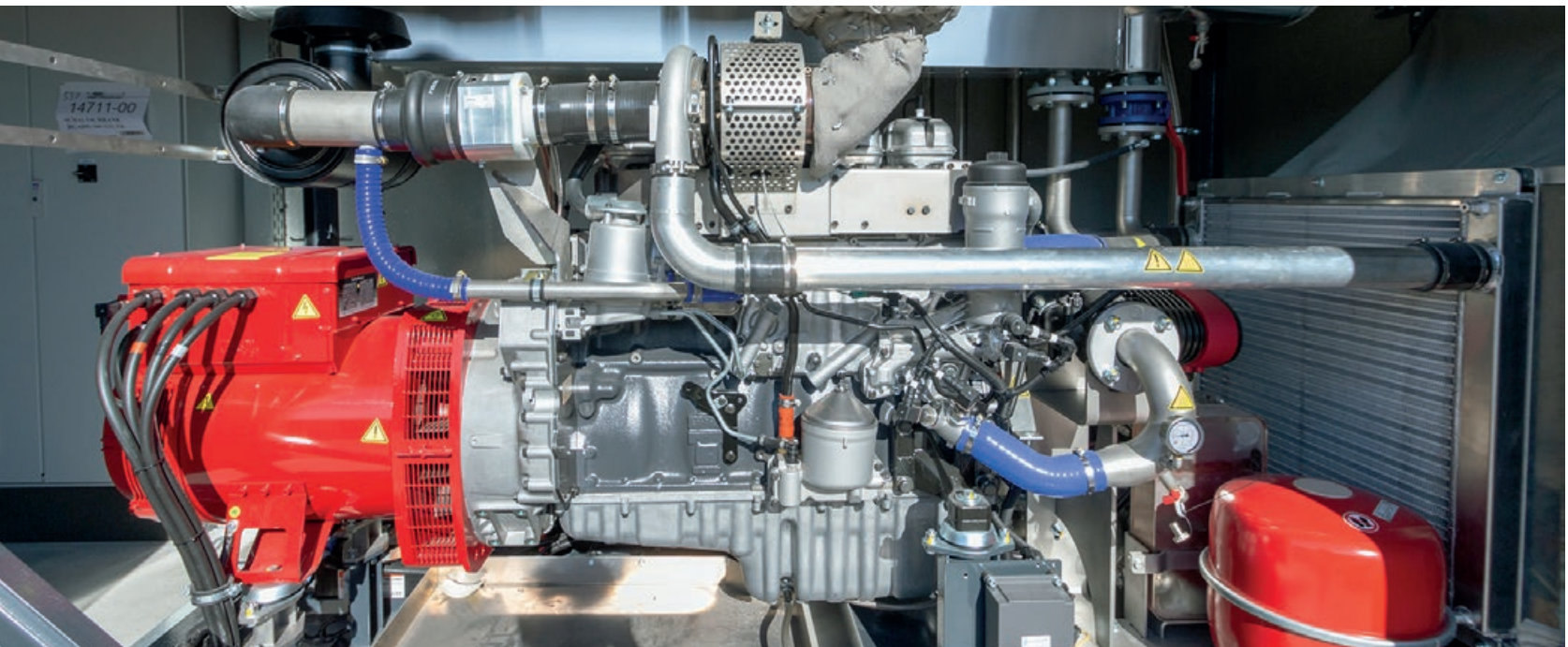
YOUR BENEFITS
AT A GLANCE

- ✓ Motors with large displacement, therefore low maintenance
- ✓ Robust and most reliable technology
- ✓ Highest availability
- ✓ Low maintenance costs
- ✓ Rapid availability of spare and wearing parts
- ✓ In-house development / construction
- ✓ Modular design / compact construction
- ✓ Individual CHP solutions (installation also in existing customer building)
- ✓ Completely pre-installed CHP units (container solutions)
- ✓ Optimum sound insulation
- ✓ Fast installation and operational readiness
- ✓ Widespread service network (in Germany and France by ServiceUnion)

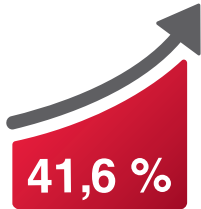


OUR CONTAINER
SOLUTIONS FOR CHPs

We offer a variety of container solutions (concrete and steel containers) that perfectly integrate into your premises.



BGA 095 ETA
Tailored to
your requirements!



BGA 095 ETA
55 – 100 kW_{el} and 100 – 180 kW_{el}

Our CHP series BGA095 is optimized for best possible performance and availability. “ETA” stands for a SCANIA OC09 5-cylinder engine that has been further developed by us and does not allow any compromises when it comes to efficiency.

The BGA 095 is a frequently chosen CHP unit in the smaller power range and a good addition for the expansion of a biogas plant.

In our BGA 095 ETA series, 2 model variants are available in different power ranges. “Type 100 ETA” from 55–100 kW_{el} and “Type 180 ETA” from 100–180 kW_{el}. The models differ, among other things, in the dimensions and the installed generator.

The BGA 095 ETA impresses with low maintenance requirements and very high availability of spare parts. All components, including the device for remote maintenance and monitoring, are mounted on a frame with minimized vibration.

YOUR BENEFITS
AT A GLANCE

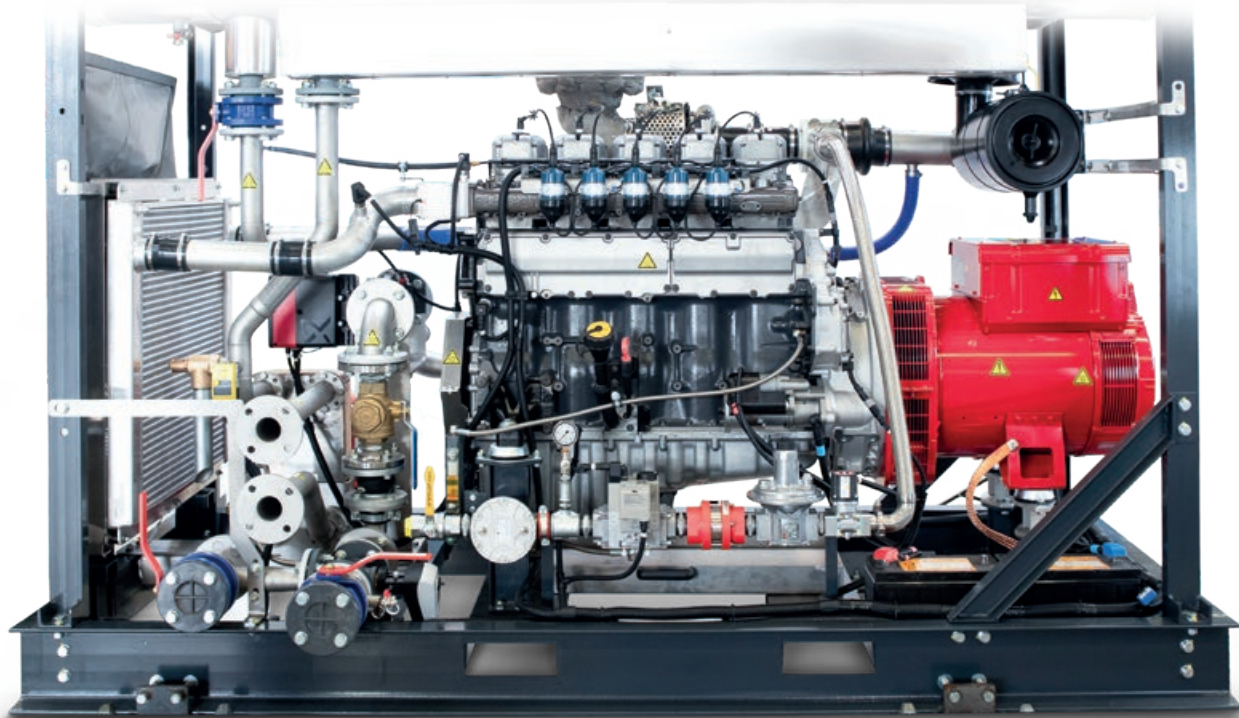
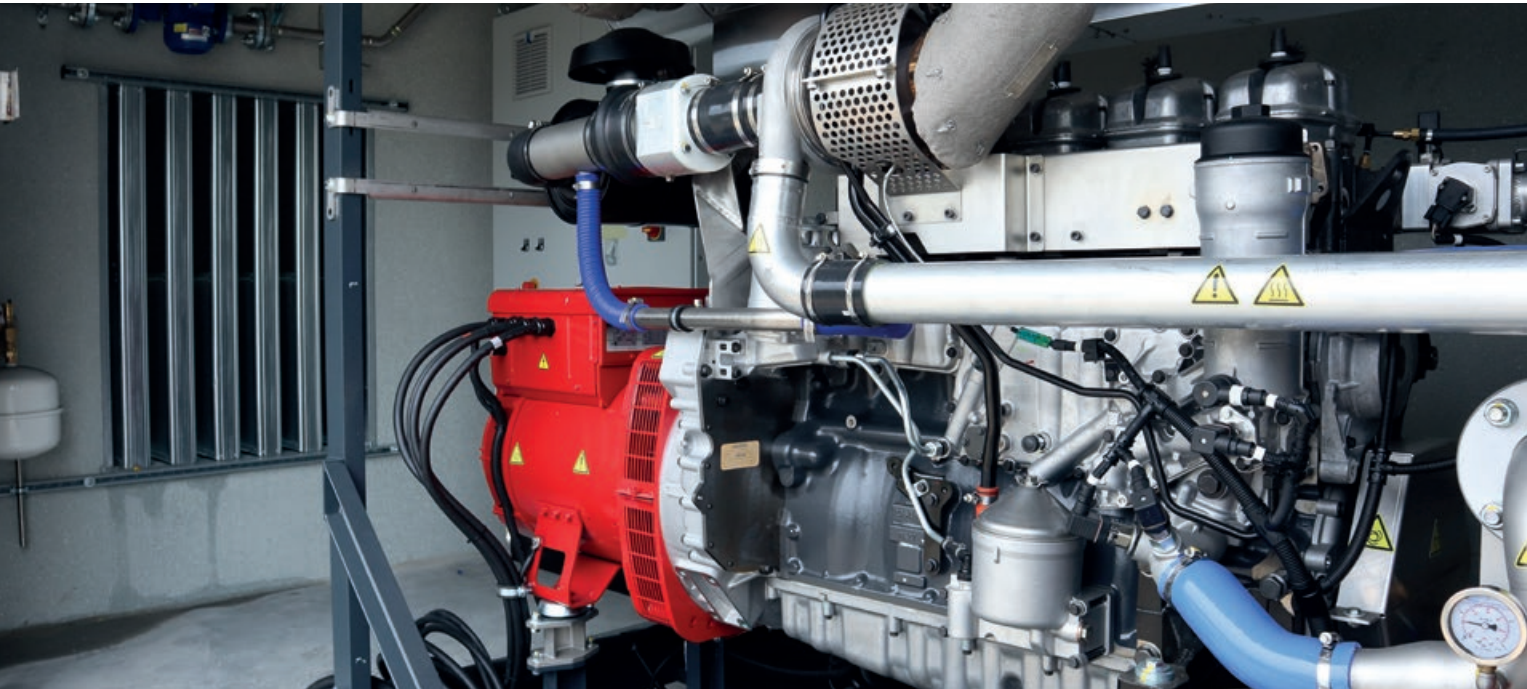
- ✓ Latest, technically mature SCANIA 5-cylinder in-line engine (OC09)
- ✓ 9 liter unit in solid construction
- ✓ Low maintenance requirements with very good availability of spare parts
- ✓ All components mounted on one frame. Including the device for remote maintenance and monitoring.
- ✓ Temperature controlled speed regulation for emergency cooler and mixture cooler
- ✓ Optional: mains starter for increasing the starting speed
- ✓ Exhaust gas temperature measurement
- ✓ Interface for balancing energy
- ✓ The CHP unit complies with the low-voltage directive VDE-AR-N 4105:2018-11 or optionally with the medium-voltage directive VDE-AR-N 4110:2018-11.

TECHNICAL DATA

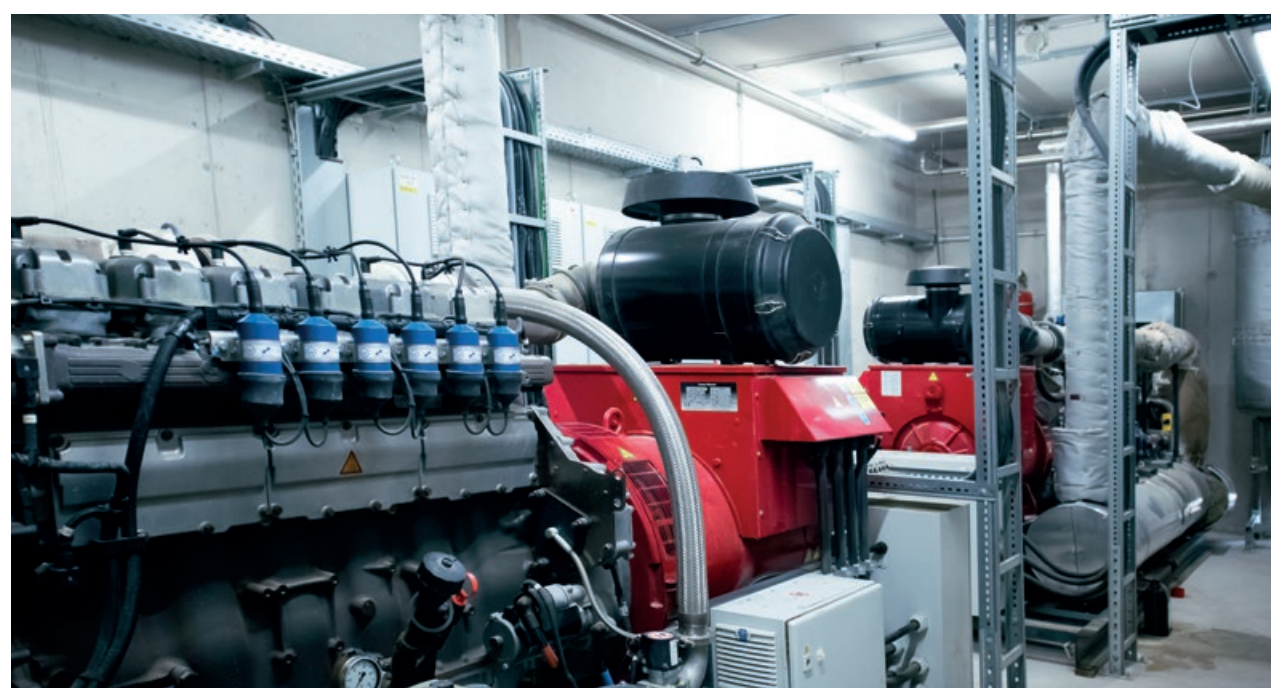
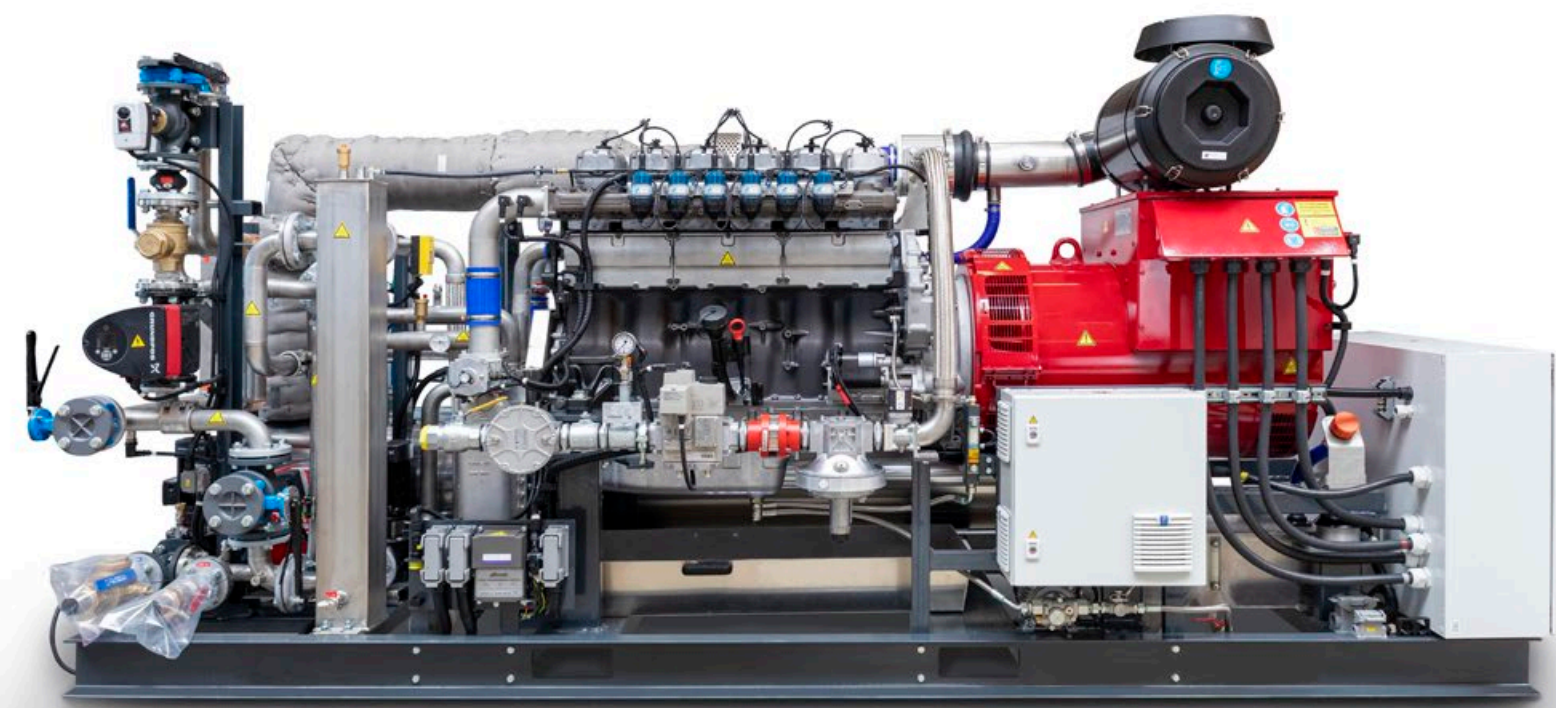
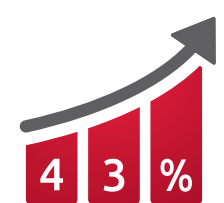
GENSET / CHP TYPE ¹ – BIOGAS 50 % CH ₄		TYPE 100 ETA		TYPE 180 ETA		
Electrical output at cos φ = 1	kW _{el}	75	100	120	150	180
Generator Leroy type: LSA - 400V, 50 Hz, IP23		44.3 M8		46.3 M7		
Rated current at cos φ = 1	A	108	144	173	217	260
Electrical efficiency ^{2,3}	%	35,4	37,4	38,6	40,7	41,6
Thermal output at 160/180 °C exhaust temperature ⁴	kW _{th}	44 (180°C)	60 (180°C)	71 (160°C)	95 (160°C)	112 (160°C)
Electric / thermal ratio	el/ th.	0,79	0,83	0,83	0,87	0,94

LEAN-BURN TURBOCHARGED BIOGAS MOTOR⁷

Construction type		5R 130 x 140		5R 130 x 140		
Displacement	Ltr.	9,3		9,3		
Rated thermal input ^{2,3} – 100 % load	kW _{el}	212	267	311	396	443
Gas consumption at 50 % CH ₄ ^{2,3}	Nm ³ /h	42,4	53,5	62,2	73,7	86,5
Length x width x height	m	2,9 x 1,3 x 2,15		4,1 x 1,5 x 2,1		



BGA 136 ETA
Our all-rounder.
Now even more efficient!



BGA 136 ETA
150 kW_{el} – 265 kW_{el}

With the CHP series 136, first manufactured in 2016, we serve an essential and popular power range.

Our proven BGA 136 received an efficiency update. The new „ETA“ version with up to 43 % efficiency will be available from 2022.

CHP units of the BGA 136 type are suitable for medium-sized farms and are ideal for flexible operation in double or even multiple units.

The BGA 136 series is particularly impressive due to its robust design, excellent starting behaviour and reliable, field-proven technology, which ensures excellent availability. The well-engineered in-line motor impresses with its low maintenance requirements and high availability.

YOUR BENEFITS
AT A GLANCE

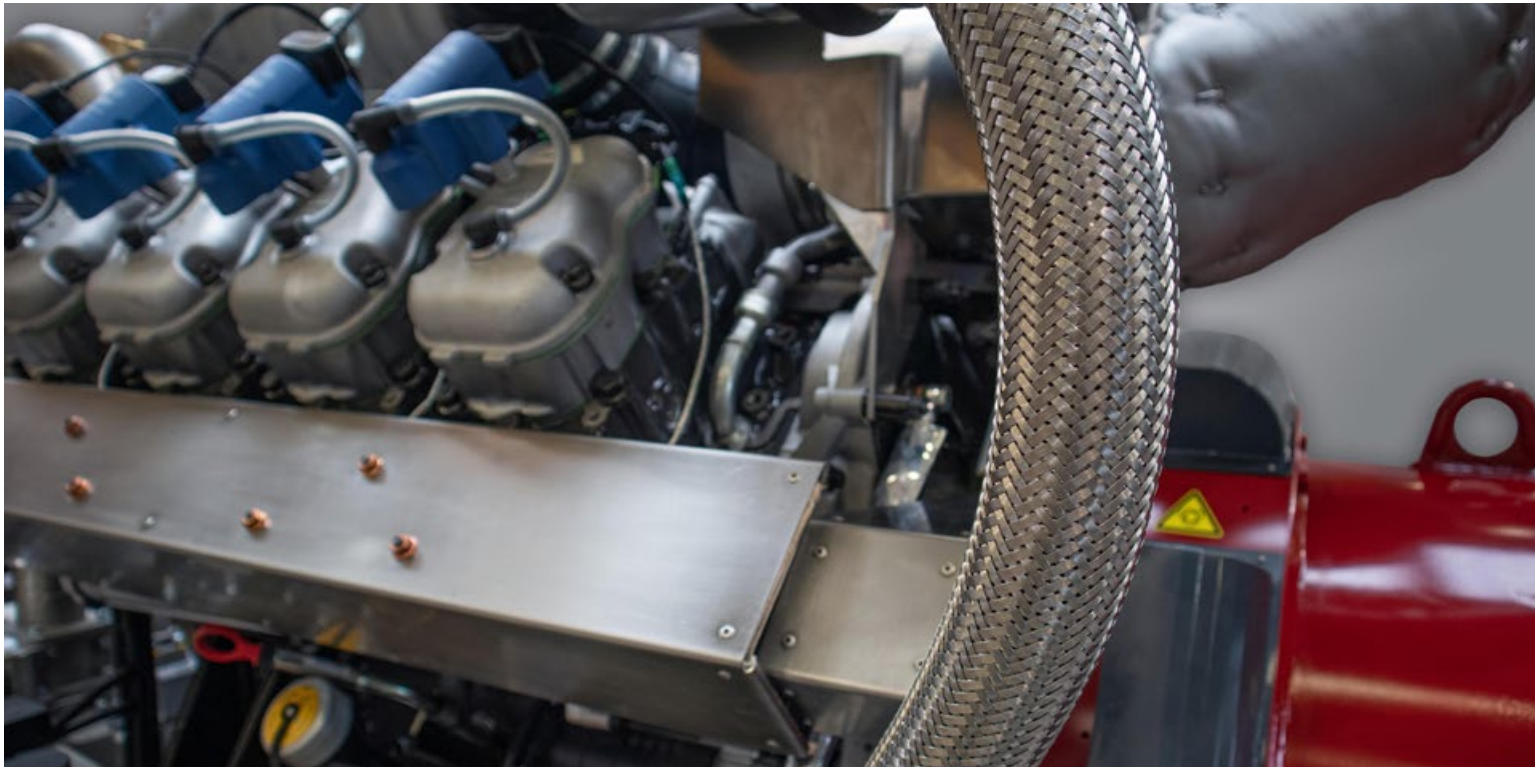
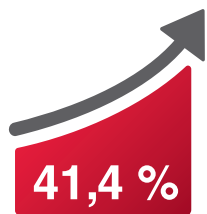
- ✓ The BGA 136 product range is based on the latest Scania DC13 engine generation
- ✓ Electrical efficiency up to 43 %
- ✓ Optimized hydraulic system, especially for flexible operation
 - thereby high and stable flow temperature
 - prevents condensation of the exhaust gas in the exhaust gas heat exchanger
 - Cooling water preheating, charge air cooling in two stages
- ✓ Mains starter included as standard to increase the starting speed ensures reliable starting behaviour
- ✓ Reliable reliable spare parts supply
- ✓ Temperature-controlled speed regulation for emergency cooler and mixture cooler
- ✓ Exhaust gas temperature measurement
- ✓ Interface for balancing energy
- ✓ The CHP unit complies with the medium-voltage guideline VDE-AR-N 4110:2018-11

TECHNICAL DATA

GENSET / CHP TYPE ¹ – BIOGAS 50 % CH ₄				
Electrical output at cos φ = 1	kW _{el}	150	200	265
Generator Leroy type: LSA - 400V, 50 Hz, IP23		47.3 S5		
Rated current at cos φ = 1	A	217	289	382
Electrical efficiency ^{2,3}	%	39,4	41,0	43,0
Thermal output at 180°C exhaust temperature ⁴	kW _{th}	89	102	120
Electric / thermal ratio	el / th.	0,74	0,87	1,00

LEAN-BURN TURBOCHARGED BIOGAS MOTOR ⁷				
Construction type		6R 130 x 160		
Displacement	Ltr.	12,7		
Rated thermal input ^{2,3} – 100 % load	kW _{el}	381	488	616
Gas consumption at 50 % CH ₄ ^{2,3}	Nm ³ /h	76,1	97,6	123,3
Length x width x height	m	4,1 x 1,5 x 2,1		

BGA 168 ETA
Powerful.
Reliable. Solid.



BGA 168 ETA
260 kW_{el} – 350 kW_{el}

The powerful power unit from our portfolio impresses with its stable and robust design. Thanks to its space-saving SCANIA 8-cylinder V-engine and the very good availability, it is a perfect CHP unit in the medium performance range.

With the help of an optimised hydraulic system, which was specially designed for flex operation, a high and stable flow temperature is achieved. This prevents condensation of the exhaust gas in the exhaust gas heat exchanger. Instead of batteries, a standardised mains starter is used in the BGA 168 ETA. This guarantees safe starting behaviour at constant speed, which is indispensable especially in flex operation.

YOUR BENEFITS
AT A GLANCE

- ✓ 8-cylinder SCANIA engine (OC16)
- ✓ Electrical efficiency up to 41,4 %
- ✓ Robust and reliable construction
- ✓ Low maintenance, very good spare parts availability
- ✓ Optimised hydraulic system, especially for flexible operation
- ✓ Mains starter to increase the starting speed
- ✓ Temperature-controlled speed regulation for emergency cooler and mixture cooler
- ✓ Charge air cooling in two stages
- ✓ Exhaust gas temperature measurement for monitoring the exhaust gas temperature
- ✓ Interface for control energy
- ✓ The CHP unit complies with the medium-voltage directive VDE-AR-N 4110:2018-11

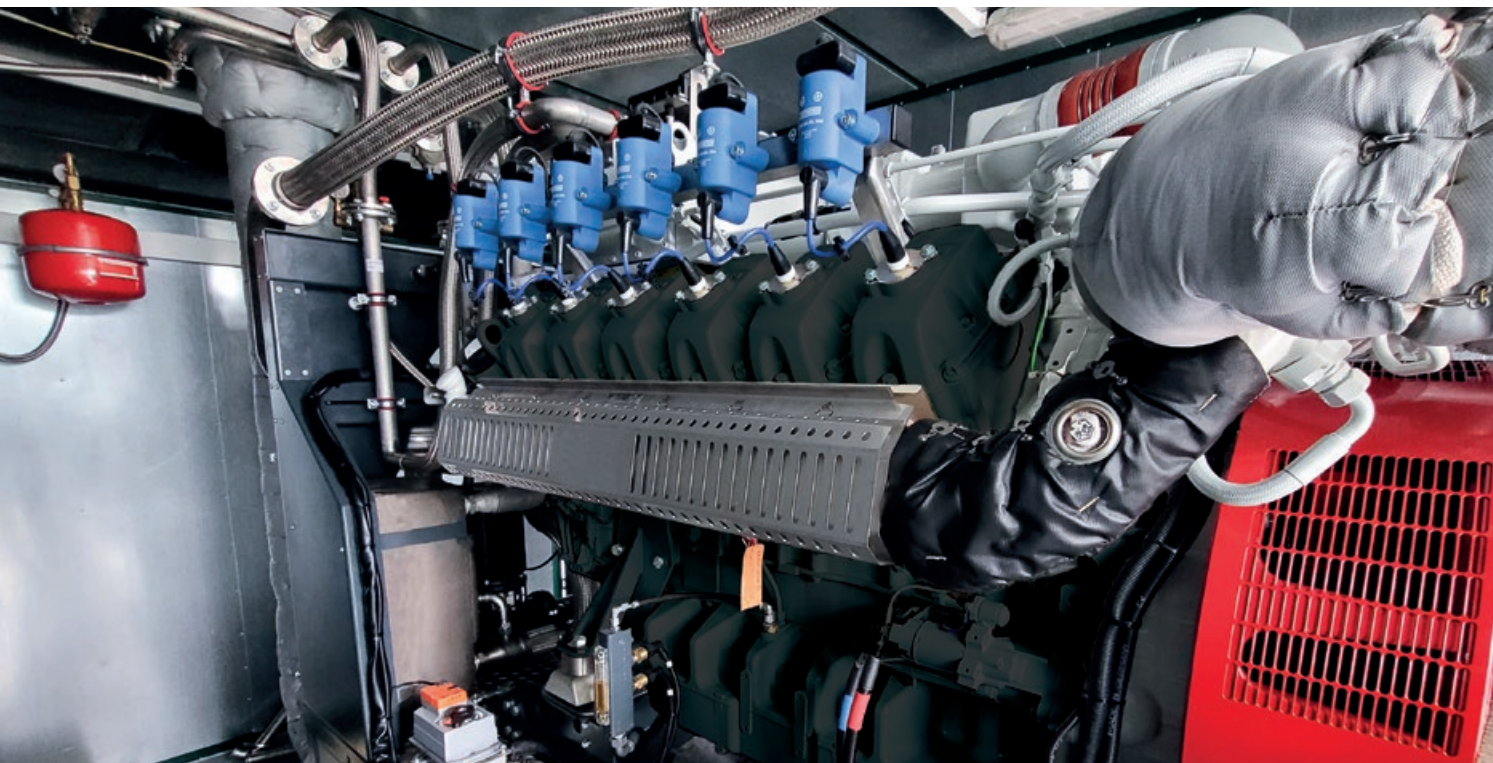
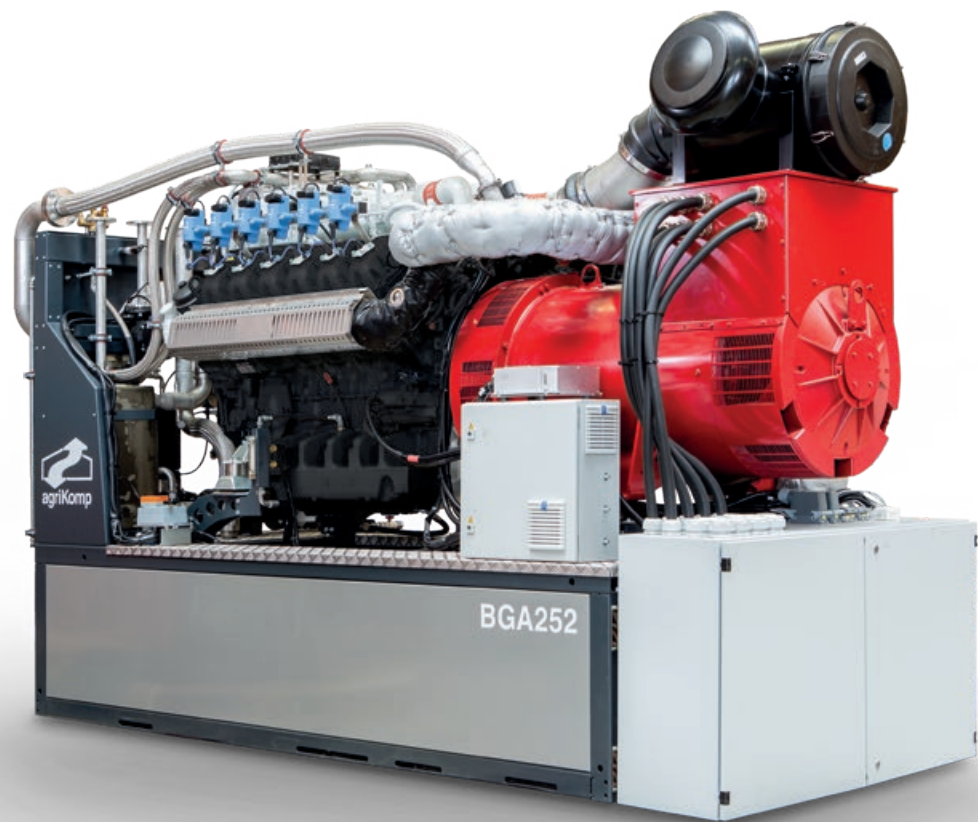
TECHNICAL DATA

GENSET / CHP TYPE ¹ – BIOGAS 50 % CH ₄				
Electrical output at cos φ = 1	kW _{el}	260	300	350
Generator Leroy type: LSA - 400V, 50 Hz, IP23			47.3 L9	
Rated current at cos φ = 1	A	375	433	505
Electrical efficiency ^{2,3}	%	40,0	41	41,4
Thermal output at 180 °C exhaust temperature ⁴	kW _{th}	270	297	334
Electric / thermal ratio at 180 °C	el / th	0,96	1,01	1,05
LEAN-BURN TURBOCHARGED BIOGAS MOTOR ⁷				
Construction type			8V 130 x 154	
Displacement	Ltr.		16,4	
Rated thermal input ^{2,3} – 100 % load	kW _{el}	650	732	845
Gas consumption at 50 % CH ₄ ^{2,3}	Nm ³ /h	130	146,3	169,1
Length x width x height	m		4,1 x 1,5 x 2,1	

BGA 252

Powerful and
perfect for flex operation.

BGA252



BGA 252

350 – 530 kW_{el}

The powerful unit from our portfolio impresses with its stable and robust design. Due to its space-saving Liebherr 12-cylinder V-engine and high availability, it is a frequently chosen CHP unit in the medium output range.

With the use of an optimised hydraulic system, which was specially designed for flexible operation, a high and stable flow temperature is achieved. This prevents condensation of the exhaust gas in the exhaust gas heat exchanger. Instead of batteries, a standardised mains starter is used in the BGA252. This guarantees safe starting behaviour at constant speed, which is indispensable especially in flexible operation.

YOUR BENEFITS
AT A GLANCE

- ✓ 12-cylinder Liebherr engine (E3262 LE212)
- ✓ Robust and reliable construction
- ✓ Low maintenance, very good spare parts availability
- ✓ Optimised hydraulic system, especially for flex operation
- ✓ Mains starter for increasing the starting speed
- ✓ Interface for balancing energy
- ✓ Charge air cooling in two stages
- ✓ Exhaust gas heat exchanger with integrated electrical exhaust gas switch-over flap for bypass operation
- ✓ Temperature-controlled RPM control for emergency cooler and mixture cooler
- ✓ The CHP unit complies with the medium-voltage guideline VDE-AR-N 4110:2018-11

TECHNICAL DATA

GENSET / CHP TYPE ¹ – BIOGAS 50 % CH ₄		BGA 252
Electrical output at cos φ = 1	kW _{el}	530
Generator Leroy type: LSA - 400V, 50 Hz, IP23		49.3 L9
Rated current at cos φ = 1	A	765
Electrical efficiency ^{2,3}	%	42
Thermal output at 200 °C exhaust temperature ⁴	kW _{th}	507
Electric / Thermal Ratio at 200 °C	el / th.	1,05
LEAN-BURN TURBOCHARGED BIOGAS MOTOR ⁷		
Construction type		12V 132 x 157
Displacement	Ltr.	25
Rated thermal input ^{2,3} – 100 % load	kW _{el}	1329
Gas consumption at 50 % CH ₄ ^{2,3}	Nm ³ /h	252,3
Length x width x height	m	3,8 x 1,4 x 2,3

agriClean 150 – 600

Gas Pre-treatment.

HIGHEST EFFICIENCY - MAXIMUM CLEANING

The agriClean product range has the function of treating the gas produced in a biogas plant for utilisation in a CHP unit. The gas treatment can be used for the combustion gases biogas, sewage gas and landfill gas. It is designed for outdoor operation, for continuous operation and, with constant flow, also frost-proof.

agriClean 150, 300, 600:
Complete system in modular design for outdoor installation, consists of:

Cooling module

Cooling of the biogas by separation of condensate

- ✓ Cooling by cold water generator incl. cooler, storage tank and safety group.
- ✓ With droplet separator (demister)

Pressure boosting and control module

Pressure boosting to the required operating pressure for CHP, control and regulating system

- ✓ Side channel compressor energy-saving controlled by frequency converter (explosion-proof)
- ✓ Temperature and pressure displays
- ✓ Pressure switch for over- and underpressure safety shutdown
- ✓ Switch cabinet for control of the system

Desulphurisation module

Removal of sulphur compounds and dust particles

- ✓ Activated carbon container made of stainless steel
- ✓ Including heating register for gas preheating
- ✓ Insulated with diffusion-proof, UV-resistant thermal insulation



TECHNICAL DATA

TYPE:		---	AC 120	AC 150	AC 300	AC 600
Biogas throughput with cooling from/to	35/20 °C:	Nm³/h	120	150	330	670
	45/20 °C:	Nm³/h	80	104	199	458
ATEX compressor		---	II3G Ex-nA IIT3	II3G Ex-nA IIT3	II3G Ex-nA IIT3	II3G Ex-nA IIT3
Cooling capacity chiller *		kW	4	8	13	28
Energy supply cooling		V/Ph/Hz	230 / 1~ / 50	400 / 3~ / 50	400 / 3~ / 50	400 / 3~ / 50
Max. pressure increase with throughput		mbar	50	150	150	150
Compressor motor capacity *		kW	0,75	3,0	5,5	11,0
Activated carbon filter type		---	300	750-2	750-2	2 x 900-3 parallel
Bulk volume ACF		Ltr.	95	520	520	2 x 1.075
Dimensions (L x W x H)		m	0,5 x 1 x 1,5	6 x 1,5 x 2,5	8 x 1,5 x 2,5	10 x 2 x 3
System weight (not filled)		kg	150	1.100	1.500	2.000

* Manufacturer's specifications



CHP Services

Retrofit options for efficiency boost.

CHP-SERVICE: THE PRECONDITION FOR EFFICIENCY!

With many service specialists, we are available to our customers for maintenance and servicing of their CHP on seven days of the week. Above all, technical on-call service at weekends and on public holidays is a matter of course for us and our service partners.

Comprehensive advice by telephone and in person ensures the operational availability of your CHP – unnecessary downtimes in the generation of heat and electricity are thus avoided.

For our qualified employees with many years of know-how, your CHP unit is the focus of their daily business. Our sophisticated remote maintenance system also enables constant monitoring and evaluation of your CHP - regardless of how many kilometres are in between.

High flexibility and quick reaction in case of emergency – for us more than a promise!

OUR SERVICES - AN END-TO-END CAREFREE PACKAGE!

If you want to be on the safe side, you can add a full maintenance contract to your CHP unit. Our CHP full maintenance contract guarantees you maximum investment protection and a high technical availability of 95% of the CHP's annual hours as well as clearly calculable maintenance costs.

You can rely on our service experts for CHP units. We currently look after over 2,000 CHP units and are constantly expanding our service in order to be close to our customers. Our specialists are also happy to provide you with advice and assistance in the area of CHP retrofitting and expansion in order to realise the potential of your biogas plant.

UPGRADE WITH OUR RETROFIT- & PERFORMANCE KITS

Renew your unit (5-, 6- or 8-cylinder) with our clever upgrade variants to the new SCANIA OC09, DC13 and OC16. The performance-optimised ETA engines significantly improve the profitability of your biogas plant. „ETA“ stands for SCANIA engines that have been further developed by us and do not allow any compromises in terms of efficiency. In addition to complete conversion sets from dual fuel to Gas-Otto technology and exchange engines for the units listed below, we also offer you individual performance kits in order to be able to realise the higher efficiency even for customers who have already converted to a newer SCANIA gas engine.

- ✓ Changeover to the latest Gas-Otto technology - also for SISU dual fuel engines.
- ✓ Efficiency increase: up to 43 % efficiency
- ✓ Reduce maintenance costs
- ✓ Plannable retrofit without additional downtime

SCR-SYSTEM – TO COMPLY WITH NO_x EMISSIONS

For compliance with emission limit values, we have added a modular SCR system for gensets up to 530 kW_{el} to our product portfolio. The modular design of our SCR system allows us to offer you individual solutions.

- ✓ Compliance with the limit values as required by the authorities
- ✓ Recording of the effective operation of the system
- ✓ Modular, manufacturer-independent system that is perfectly matched to each other
- ✓ Excellent equal distribution rates and flow velocities, thus low AdBlue consumption and high conversion rates
- ✓ Long service life of the honeycombs as well as low follow-up costs due to ideal temperature conditions
- ✓ Compact system that can be installed both indoors and outdoors
- ✓ Compatible with our NO_xLog PLC
- ✓ Visualisation on site as well as connection to akCockpit for visualisation on PC, tablet or smartphone

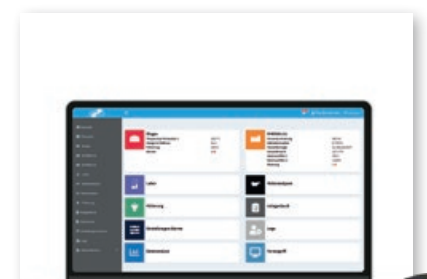


SCR SYSTEM



ENERGIEPILOT

The „EnergiePilot“ is used for data exchange and for the control of the feed-in power. It controls the CHP, connects and coordinates energy production with the virtual power plant of the energy direct marketer.



AK COCKPIT

You have full control over the complete plant with the akCockpit app. It was awarded with the INNOVSPACE 2021 in France.

