



agriKomp GmbH: Certified acc. to ISO 9001



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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

- **S** BGA 086/55 kW_{al} 80 kW_{al}
- **S** BGA 095/100 kW_{el} 150 kW_{el}
- **S** BGA 136 ETA/150 kW_{el} 265 kW_{el}
- **S** BGA 222/300 kW_{el} 350 kW_{el}
- **S** BGA 252/490 kW_{el} 530 kW_{el}
- agriClean gas treatment

YOUR BENEFITS AT A GLANCE

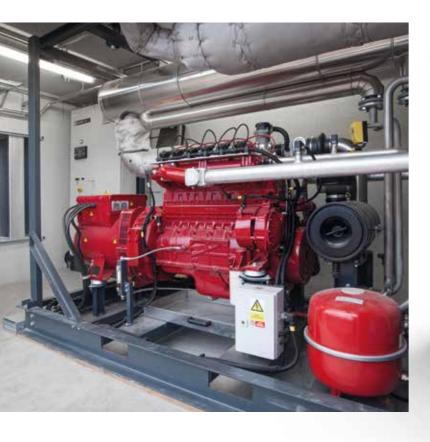
- Motors with large displacement, therefore low maintenance
- Robust and most reliable technology
- Highest availability
- M Low maintenance costs
- Rapid availability of spare and wearing parts
- In-house development /
- Modular design / compact construction

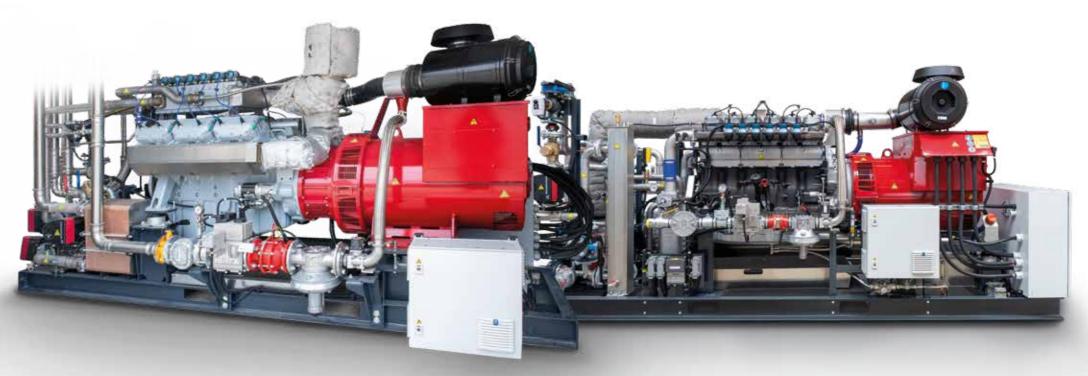
- Individual CHP solutions (installation also in existing customer building)
- Completely pre-installed CHP units (container solutions)
- Optimum sound insulation
- Fast installation and operational readiness
- Widespread service network (ServiceUnion)



OUR CONTAINER SOLUTIONS FOR CHPs

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





High endurance with 8 litres of displacement







The robust and reliable biogas unit series 086 (BGA 086) for the small power range has been a proven and popular agriKomp development since 2014. In the capacity class from 55 kW $_{\rm el}$ up to 80 kW $_{\rm el}$, the combined heat and power unit is an ideal solution for small-scale farm-based biogas plants. Small farms benefit from a long CHP operating period, a stable running performance and a high availability of spare parts.

The BGA 086 has a modified 6-cylinder in-line engine and is optimised for the best possible performance and availability. The well-engineered in-line engine impresses with its low maintenance requirements. Thanks to its 8 litre capacity, the engine is a real endurance runner with good performance values.

The CHP unit benefits from the fact that all components are well integrated and optimised for high performance with low maintenance requirements. Sophisticated remote maintenance technology allows the engine to be monitored directly from our service centre. This ensures continuous monitoring of all sensors including temperature and pressure for exhaust gas, engine oil, cooling water and charge air. This guarantees safe operation of the CHP unit. Further safety standards are set with the smoke / gas alarm as well as an emergency stop and siren / flash alarm.

YOUR BENEFITS AT A GLANCE





Low maintenance requirements with outstanding availability of spare parts

Very compact, space-saving design: All components are mounted on one rack, including the device for remote maintenance and monitoring

Engine cooling water circuit with electric cooling water pump and directly controlled 3-way valve

Electronic high-voltage ignition system

Lambda control valve

Automatic combustion mixture control

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 TYPE1 - BIOGAS 50 % CH, **TYPE 75** TYPE 80 Electrical output at $\cos \varphi = 1$ kW_{ol} 75 80 Generator Leroy type: LSA - 400V, 50 Hz, IP23 44.3 M8 44.3 M8 Rated current at $\cos \varphi = 1$ Α 108 115 Electrical efficiency ^{2,3} % 36,50 36,56 Thermal output at 140 °C exhaust temperature 4 94 kW_{th} 90 Electric / Thermal Ratio at 140 °C 0,85 0,83 LEAN-BURN TURBOCHARGED BIOGAS MOTOR 7 6R 111 x 139 6R 111 x 139 Construction type Ltr. Displacement 8,07 8,07 Rated thermal input ^{2,3} - 100 % load kW_{ol} 205 219 Gas consumption at 50 % CH₄ ^{2,3} Nm³/h 41,1 43,8 2,9 x 1,3 x 2,15 Length x width x height 2,9 x 1,3 x 2,15

Tailored to your requirements!

BGA 095 100 KW_{el} - 150 KW_{el}

Our CHP series BGA 095 is optimized for best possible performance and availability. 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.

The BGA 095 is equipped with the latest SCANIA 5-cylinder in-line engine DC09. The engine is based on a robust design with a strength-optimized cylinder block containing water-cooled cylinder liners that can be easily replaced. Single cylinder heads with 4 valves per cylinder promote ease of repair and efficiency.

The BGA 095 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 (DC09)
- 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 electrical 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 TYPE¹ - BIOGAS 50 % CH ₄		TYPE	E 100	TYPE	E 150	
Electrical output at cos φ = 1	kW _{el}	75	100	120	150	
Generator Leroy type: LSA - 400V, 50 Hz, IP23		44.3 M8		46.3 M7		
Rated current at $\cos \varphi = 1$	Α	108	144	173	217	
Electrical efficiency ^{2,3}	%	33,1	35,9	36,2	36,6	
Thermal output at 180 °C exhaust temperature 4	kW_{th}	98	120	151	174	
Electric / Thermal Ratio at 180 °C	el/ th.	0,77	0,83	0,79	0,86	
LEAN-BURN TURBOCHARGED BIOGAS MOTOR 7	,					
Construction type		5R 130	0 x 140	5R 130 x 140		

Ltr.

kW

Nm³/h

Displacement

Rated thermal input 2,3 – 100 % load

Gas consumption at 50 % CH₄ ^{2,3}

Length x width x height

9,3

2,9 x 1,3 x 2,15

279

55,7

227

45,3

9,3

4,1 x 1,5 x 2,1

331

66,3

410

82,0



BGA 136 ETA

Our all-rounder. Now even more efficient! 4 3 %







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 avail-ability. 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



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
- Guaranteed 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 T	TYPE1-	BIOGAS	50 % CH,
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52.02.7, 6.11. 1.1. 2. 5.00.7.0 00.7. 0.1.4							
	Electrical output at $\cos \phi = 1$	$\mathrm{kW}_{\mathrm{el}}$	150	200	265		
	Generator Leroy type: LSA - 400V, 50 Hz, IP23			47.2 S4			
	Rated current at $\cos \varphi = 1$	Α	217	289	382		
	Electrical efficiency ^{2,3}	%	39,4	41,0	43,0		
	Thermal output at 160 °C exhaust temperature 4	kW _{th}	89	102	120		
	Electric / Thermal Ratio at 160 °C	el/ th.	0,74	0,87	1,00		

LEAN-BURN TURBOCHARGED BIOGAS MOTOR 7

Construction type	6R 130 x 160				
Displacement	Ltr.	Ltr. 12,7			
Rated thermal input ^{2,3} – 100 % load	kW _{el}	381	488	616	
Gas consumption at 50 % CH ₄ ^{2,3}	Nm³/h	76,1	97,6	123,3	
Lenath x width x height	m		4.1 x 1.5 x 2.1		

Powerful. Reliable. Solid.

BGA 222 300 KW_{el} - 350 KW_{el}

We introduced the large, stable and reliable 222 biogas genset series to the market in 2008.

Since then, the strong and powerful series has been appreciated by our customers and is often installed in the power class up to 350 kW $_{\rm el}.$ The CHP units have established and proven themselves not only in Germany, but also internationally with large agricultural businesses. They are extremely efficient and are also extremely easy to maintain.

The BGA222 series consists of a robust 12-cylinder V-engine, which guarantees a long service life. Through ongoing development, the genset has been optimised for performance and high availability.

Advanced sensor technology makes it possible to control the temperature of each cylinder. The powerful unit impresses with its solid construction. Due to its space-saving 12-cylinder V-engine and its very high availability, it is a popular CHP unit in the medium performance range.

YOUR BENEFITS AT A GLANCE

Enhanced 12-cylinder V-engine

Robust and solid construction

Cow maintenance

Very good availability of spare parts

Control of individual cylinder temperatures

Charge air cooling in two stages

The CHP unit complies with the medium-voltage guideline VDE-AR-N 4110:2018-11



TECHNICAL DATA			
TECHNICAL DATA			l
GENSET / CHP TYPE¹ - BIOGAS 50 % CH ₄		TYPE 300	TYPE 350
Electrical output at cos φ = 1	$kW_{\rm el}$	300	350
Generator Leroy type: LSA - 400V, 50 Hz, IP23		47.2 M7	47.2 M7
Rated current at $\cos \varphi = 1$	А	433	505
Electrical efficiency ^{2,3}	%	36,3	37,5
Thermal output at 160 °C exhaust temperature 4	kW_{th}	350	400
Electric / Thermal Ratio at 160 °C	el/ _{th.}	0,86	0,88
LEAN-BURN TURBOCHARGED BIOGAS MOTOR 7			
Construction type		12V 128 x 142	12V 128 x 142

Ltr.

kW_{ol}

Nm³/h

Displacement

Rated thermal input ^{2,3} – 100 % load

Gas consumption at 50 % CH₄ ^{2,3}

Length x width x height

21,91

826

165,3

4,1 x 1,5 x 1,9

21,91

933

186,7

4,1 x 1,5 x 1,9



Powerful and perfect for flexible operation.



BGA 252 - UP TO 530 KW_{el}

The powerful unit from our portfolio impresses with its stable and robust design. Due to its space-saving MAN 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 BGA 252. This guarantees safe starting behaviour at constant speed, which is indispensable especially in flexible operation.

YOUR BENEFITS AT A GLANCE

12-cylinder MAN 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 TYPE¹ - BIOGAS 60 % CH ₄		BGA 252
Electrical output at $\cos \phi = 1$	kW_{el}	530
Generator Leroy type: LSA - 400V, 50 Hz, IP23		49.3 L9
Rated current at $\cos \phi = 1$	А	765
Electrical efficiency ^{2,3}	%	39,9
Thermal output at 200 °C exhaust temperature 4	kW _{th}	537
Electric / Thermal Ratio at 200 °C	el / th.	0,99
LEAN-BURN TURBOCHARGED BIOGAS MOTOR 7		
Construction type		12V 132 x 157
Displacement	Ltr.	25,78
Rated thermal input ^{2,3} – 100 % load	kW _{el}	1329
Gas consumption at 60 % CH ₄ ^{2,3}	Nm³/h	221,5
Length x width x height	m	3,8 x 1,4 x 2,3

OVERVIEW

Everything at a glance!

Our entire CHP portfolio!







TECHNICAL DATA		BGA 086	BGA 095			
GENSET / CHP TYPE¹ - BIOGAS 50 % CH ₄		TYPE 80	TYPE 100		TYPE 150	
Electrical output at cos φ = 1	lectrical output at cos φ = 1 kW _{el}		75	100	120	150
Generator Leroy type: LSA - 400V, 50 Hz, IP23		44.3 M8	44.3 M8		46.3 M7	
Rated current at cos φ = 1	А	115	108	144	173	217
Electrical efficiency ^{2,3}	ectrical efficiency ^{2,3} %		33,1	35,9	36,2	36,6
Thermal output at () °C exhaust temperature 4 kW _{th}		94 (140)	98 (180)	120 (180)	151 (180)	174 (180)
Electric / Thermal Ratio at () °C		0,85 (140)	0,77 (180)	0,83 (180)	0,79 (180)	0,86 (180)
LEAN-BURN TURBOCHARGED BIOGAS MOTOR 7						
Construction type		6R 111 x 139	5R 130 x 140 5R 130		0 x 140	
Displacement	Ltr.	8,07	9,3		9	,3
Rated thermal input ^{2,3} – 100 % load	kW _{el}	219	227	279	331	410
Gas consumption at 50 % CH ₄ ^{2,3}	Nm³/h	43,8	45,3	55,7	66,3	82,0
Length x width x height m		2,9 x 1,3 x 2,15	2,9 x 1,3 x 2,15 4,1 x 1		,5 x 2,1	

	BGA 136 ETA			BGA 222		
			TYPE 300	TYPE 350	TYPE 252 (at 60 % CH ₄)	
150	200	265	300	350	530	
	47.2 S4		47.2 M7	47.2 M7	49.3 L9	
217	289	382	433	505	765	
39,4	41,0	43,0	36,3	37,5	39,9	
89 (180)	102 (180)	120 (180)	350 (160)	400 (160)	537 (200)	
0,74 (180)	0,87 (180)	1,00 (180)	0,86 (160)	0,88 (160)	0,99 (200)	
	6R 130 x 160		12V 128 x 142	12V 128 x 142	12V 132 x 157	
	12,7		21,91	21,91	25,78	
381	488	616	826	933	1329	
76,1	97,6	123,3	165,3	186,7	221,5 (at 60% CH ₄)	
4,1 x 1,5 x 2,1			4,1 x 1	,5 x 1,9	3,8 x 1,4 x 2,3	

<sup>Type designation: BGA = BioGasAggregate (=CHP); "xyz" = "xy" I. displacement and "z" cylinders.

Electrical power / Efficiency based on ISO standard power at standard reference conditions according to ISO 3046-1: 2002-05 with corresponding tolerance.

Acc. to FIG. ISO 3046-1: 2002-05, min LHV (Lower heating value):

5,0 kWh/m³ N ≈ 50 % CH₄. (Except BGA252: 6,0 kWh/m³ N ≈ 60 % CH₄)</sup>

Tolerance thermal power: +/- 8%
 Permissible oil consumption calculated on an interval of 500 operating hours at rated capacity: +/- 20%
 Emissions according to manufacturers declaration No.1100040 (DE, EN)

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	35/20 °C:	Nm³/h	120	150	330	670
with cooling from/to	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 capa	city *	kW	0,75	3,0	5,5	11,0
Activated carbon filter ty	ре		300	750-2	750-2	2 x 900-3 parallel
Bulk volume ACF	Bulk volume ACF		95	520	520	2 x 1.075
Dimensions (L x W x H)	Dimensions (L x W x H)		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







SERVICE

CHP-Services Retrofit options for efficiency boost.



UPGRADE TO SCANIA DC13 ETA WITH OUR RETROFIT- & **PERFORMANCE KITS**

Efficiency and reliability with our retrofit package for all aged SCANIA DC12 and Doosan V8 engines. The retrofit package is available for aged dual fuel and BlueRail

"ETA" stands for a SCANIA DC13 engine that has been further developed by agriKomp and makes no compromises when it comes to efficiency. In cooperation with ServiceUnion, several packages have been developed on SCANIA DC13 ETA.

In addition to complete conversion sets and exchange engines for various units, we also offer you individual performance sets in order to be able to realise the higher efficiency even with engines that have already been converted to a DC13 gas engine.

Switch to modern Gas-Otto-technology (SCANIA DC13) Increase efficiency Reduce maintenance costs Planned replacement avoiding unnecessary downtime Maximum security through 2-year manufacturer's warranty on DC13 motor block incl. cylinder heads, turbocharger and material for maintenance work.

- Higher efficiency (up to 43%) with the same operating safety
- Longer service life with less stress on the
- Change to modern emission-optimised Gas-Otto-
- Combustion optimised through improved piston
- Lower exhaust gas temperature
- Planned replacement avoiding unnecessary
- warranty on DC13 motor block incl. cylinder work

- Reduce maintenance and feedstock costs

- Maximum security through 2-year manufacturer's heads, turbocharger and material for maintenance



Maintenance & spare parts

Reliable. Experienced. By your side.

NO_vLOG -NO,-SURVEILLANCE SYSTEM

- Measurement and storage of NO, emissions from up to 6 CHP units
- Manufacturer-independent surveillance system
- Integration of existing NO, sensors possible
- Alerts in case of operationally relevant malfunctions or exceeding of critical values
- Simple operation via PC, tablet or mobile phone
- Quick and simple installation

SCR-SYSTEM -TO COMPLY WITH NO, EMISSIONS

- Compliance with all limits as required by the authorities in some countries
- Recording of the effective operation of the plant
- Environmentally friendly operation of the plant
- Oxidation catalyst integrated
- Higher efficiencies possible due to stricter reduction of NO emissions
- Connection to aKCockpit possible
- Touch panel for on-site visualisation and connection to the aKCockpit

MORE CONTROL COMPONENTS

Energiepilot:

The energy pilot 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 direct energy provider.

aKCockpit:

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



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 knowhow, 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.

Rely on our service experts for CHP units with dual fuel or gas engines. We currently support over 2.000 CHP units and are constantly expanding our service to be close to our customers. In the area of CHP repowering and expansion, our specialists will also be happy to provide you with advice and assistance in order to unlock the potential of your biogas plant.