

GXC, ACG Series

PowerLink Engine

GAS COGENERATION UNIT
10KW-350KW



HEAT & POWER

POWERlink
Power Systems
Power Link the World

POWERLINK

ABOUT US

PowerLink Group has, since 2012, introduced a range of cogeneration power supply units including the GXC, ACG, CG, TCG series that run on natural gas, biogas, and LPG. These units, with power capabilities ranging from 12 KW to 2,000 KW, have played a significant role in the renewable energy sector, as well as in promoting energy efficiency and substitution. Each series has unique features tailored to the specific region and application for which it is designed. PowerLink consistently focuses on durability, efficiency, low emissions, online testing, and offline lifecycle management during parts selection, system design, and software development for its gas products. Recognizing the varying electrical standards, emission regulations, and gas safety controls across different regions, PowerLink also produces a variety of standard cogeneration units designed to meet the specific energy needs of different applications and regions.

CATALOGUE

- GAS ENERGY BUSINESS OVERVIEW
- GXC, ACG SERIES PRODUCTS
- MAIN COMPONENTS
- MANUFACTURING CAPACITY OF GAS PRODUCTS
- CASES

WIDELY USED IN MANY FIELDS



GXC, ACG SERIES PRODUCTS

Let's direct our attention to the GXC and ACG series to better understand the unique features of PowerLink's gas cogeneration units. Our latest offerings, these two series, are powered by cost-efficient engines and fitted with top-grade spare parts, delivering power capacities ranging from 10KW to 350KW. The proof of their effectiveness and reliability lies in their operational performance. Our units have found homes across Europe, South America, Russia, Southeast Asia, and the Middle East, consistently providing steady and reliable heat and power at project sites. As a result, they yield remarkable returns for both owners and investors.



POWERFUL ENGINE



INTRODUCTION OF GXC SERIES COGENERATION UNIT

The GXC Series stands as an economical cogeneration unit, engineered to offer distributed power solutions for small energy networks, thereby fulfilling customer demands for both heat and electricity. Key components like the engine and alternator are entirely manufactured by PowerLink, resulting in products that are compact, energy-efficient, durable, and versatile in terms of fuel compatibility (Natural Gas, Biogas, and LPG). Catering to individual customer needs, PowerLink offers three variations of the GXC Series: the container type, the soundproof set, and the open set, each meeting a unique set of requirements.

HEAT & POWER



GXC SERIES GAS COGENERATION UNITS

Container Unit

Power range: 10kWe ~ 350kWe

Soundproof Unit

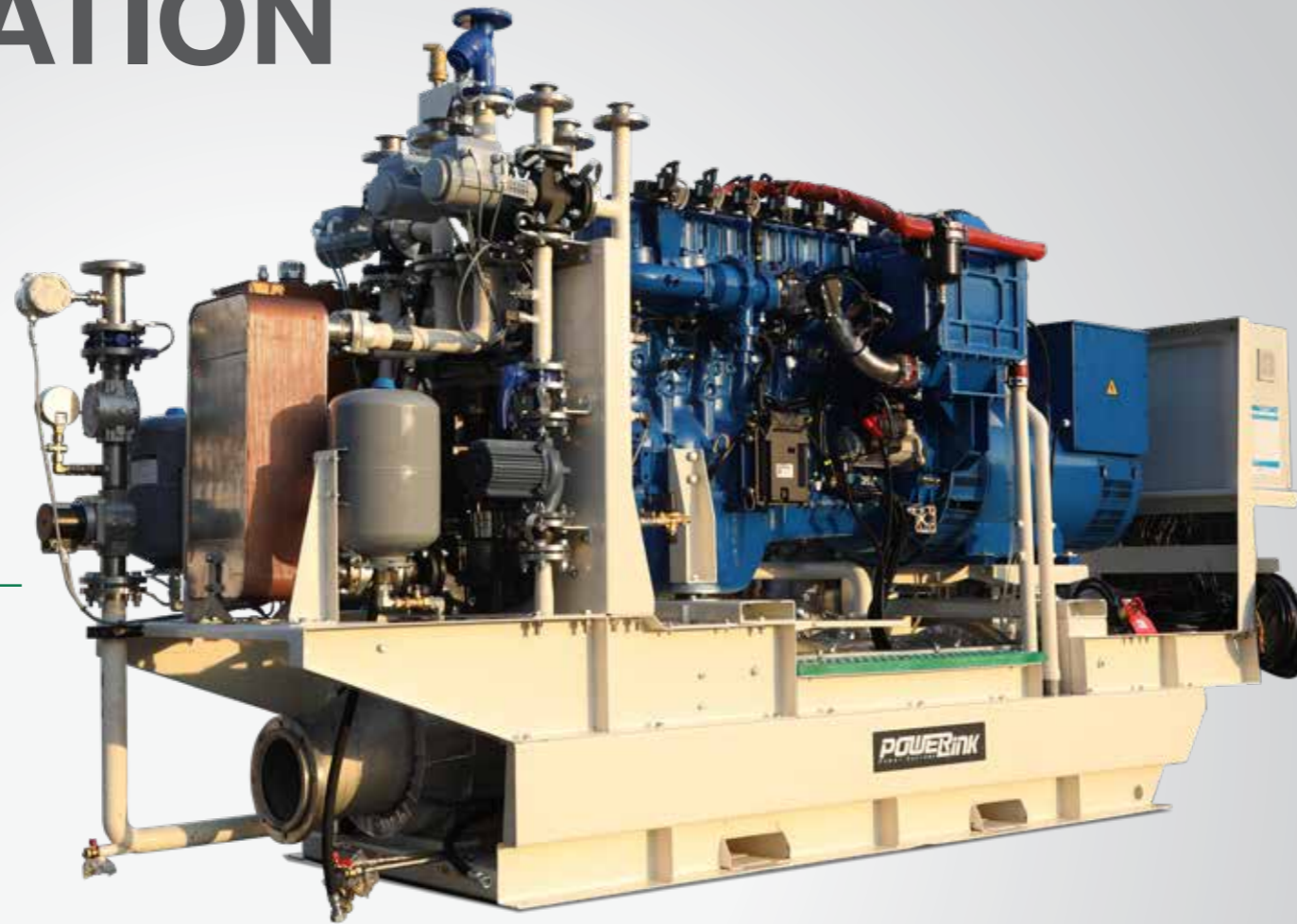
Power range: 10kWe ~ 350kWe

Open Unit (Standard Basic Module)

Power range: 10kWe ~ 350kWe

OPEN GAS COGENERATION UNITS

- air-to-air inter-cooling engine;
- small in size;
- flexible parallel and grid connected control system;
- G99 certification available;
- 94% conversion efficiency AC alternator.



GXC SERIES STANDARD CONFIGURATION (OPEN)

- Gas engine
- Alternator
- Elastic coupling
- PCC300 control system (parallel, grid connection, island)
- Gas train (ball valve, solenoid valve, pressure regulating valve, filter)
- Gas leakage detector
- Jacket water circulating pump
- Heating water circulating pump
- Mixture circulating pump
- Water/water heat exchanger
- Smoke/water heat exchanger
- Expansion drum
- Three-way thermostatic valve
- Intercooler radiator (remote horizontal)
- Water jacket preheater
- Automatic oil filling system
- New oil tank, waste oil tank (container CHP)
- Container
- Soundproof
- Open

CONTAINER GAS CONGENERATION UNITS

- air-to-air inter-cooling engine;
- small in size;
- flexible parallel and grid connected control system;
- G99 certification available;
- 94% conversion efficiency AC alternator.



GXC SERIES STANDARD CONFIGURATION + CONTAINER

- Gas engine
- Alternator
- Elastic coupling
- PCC300 control system (parallel, grid connection, island)
- Gas train (ball valve, solenoid valve, pressure regulating valve, filter)
- Gas leakage detector
- Jacket water circulating pump
- Heating water circulating pump
- Mixture circulating pump
- Water/water heat exchanger
- Smoke/water heat exchanger
- Expansion drum
- Three-way thermostatic valve
- Intercooler radiator (remote horizontal)
- Water jacket preheater
- Automatic oil filling system
- New oil tank, waste oil tank (container CHP)
- Container
- Soundproof
- Open

SOUNDPROOF GAS COGENERATION UNITS

- Integrated engine and cooling system;
- 70-76dBA @ 7m noise level;
- flexible parallel and grid connected control system;
- CE certified;
- lean combustion electronic control system.



GXC SERIES STANDARD CONFIGURATION SOUNDPROOF

- Gas engine
- Alternator
- Elastic coupling
- PCC300 control system (parallel, grid connection, island)
- Gas train (ball valve, solenoid valve, pressure regulating valve, filter)
- Gas leakage detector
- Jacket water circulating pump
- Heating water circulating pump
- Mixture circulating pump
- Water/water heat exchanger
- Smoke/water heat exchanger
- Expansion drum
- Three-way thermostatic valve
- Intercooler radiator (remote horizontal)
- Water jacket preheater
- Automatic oil filling system
- New oil tank, waste oil tank (container CHP)
- Container
- Soundproof
- Open

GXC SERIES SELECTION TABLE

50Hz/1500RPM 400V 3PH ,380V & 415V Available

CONTAINERIZED COGEN - NG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
GXC35C-NG	NG	GX5S-E02	35	34.0%	51.8%	85.8%
GXC50C-NG	NG	GX5S-LE02	50	32.3%	45.2%	77.5%
GXC60C-NG	NG	GX7S-E02	60	34.2%	51.8%	86.0%
GXC85C-NG	NG	GX10T-E02	85	35.0%	51.4%	86.4%
GXC100C-NG	NG	GX7S-LE02	100	35.1%	46.7%	81.8%
GXC130C-NG	NG	GX12T-E02	130	35.3%	48.5%	83.8%
GXC150C-NG	NG	GX10T-LE02	150	35.6%	48.2%	83.8%
GXC200C-NG	NG	GX12T-LE02	200	35.7%	48.4%	84.1%
GXC250C-NG	NG	GX13K-LE02	250	36.2%	46.3%	82.5%
GXC350C-NG	NG	GX20T-LE02	350	38.8%	47.6%	86.4%

SOUNDPROOF COGEN - NG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
GXC35S-NG	NG	GX5S-E02	35	34.0%	51.8%	85.8%
GXC50S-NG	NG	GX5S-LE02	50	32.3%	45.2%	77.5%
GXC60S-NG	NG	GX7S-E02	60	34.2%	51.8%	86.0%
GXC85S-NG	NG	GX10T-E02	85	35.0%	51.4%	86.4%
GXC100S-NG	NG	GX7S-LE02	100	35.1%	46.7%	81.8%
GXC130S-NG	NG	GX12T-E02	130	35.3%	48.5%	83.8%
GXC150S-NG	NG	GX10T-LE02	150	35.6%	48.2%	83.8%
GXC200S-NG	NG	GX12T-LE02	200	35.7%	48.4%	84.1%
GXC250S-NG	NG	GX13K-LE02	250	36.2%	46.3%	82.5%
GXC350S-NG	NG	GX20T-LE02	350	38.8%	47.6%	86.4%

OPEN SET COGEN - NG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
GXC35-NG	NG	GX5S-E02	35	34.0%	51.8%	85.8%
GXC50-NG	NG	GX5S-LE02	50	32.3%	45.2%	77.5%
GXC60-NG	NG	GX7S-E02	60	34.2%	51.8%	86.0%
GXC85-NG	NG	GX10T-E02	85	35.0%	51.4%	86.4%
GXC100-NG	NG	GX7S-LE02	100	35.1%	46.7%	81.8%
GXC130-NG	NG	GX12T-E02	130	35.3%	48.5%	83.8%
GXC150-NG	NG	GX10T-LE02	150	35.6%	48.2%	83.8%
GXC200-NG	NG	GX12T-LE02	200	35.7%	48.4%	84.1%
GXC250-NG	NG	GX13K-LE02	250	36.2%	46.3%	82.5%
GXC350-NG	NG	GX20T-LE02	350	38.8%	47.6%	86.4%

CONTAINERIZED COGEN - BG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
GXC35C-BG	BG	GX5S-E02	35	33.7%	48.3%	82.0%
GXC50C-BG	BG	GX5S-LE02	50	32.6%	48.4%	81.0%
GXC60C-BG	BG	GX7S-E02	60	34.5%	48.8%	83.3%
GXC85C-BG	BG	GX10T-E02	85	35.0%	48.3%	83.3%
GXC100C-BG	BG	GX7S-LE02	100	35.2%	48.6%	83.8%
GXC130C-BG	BG	GX12T-E02	130	35.1%	48.8%	83.9%
GXC150C-BG	BG	GX10T-LE02	150	35.3%	48.8%	84.1%
GXC200C-BG	BG	GX12T-LE02	200	35.5%	48.3%	83.8%
GXC250C-BG	BG	GX13K-LE02	250	36.6%	46.6%	83.2%
GXC350C-BG	BG	GX20T-LE02	350	37.8%	46.3%	84.1%

SOUNDPROOF COGEN - BG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
GXC35S-BG	BG	GX5S-E02	35	33.7%	48.3%	82.0%
GXC50S-BG	BG	GX5S-LE02	50	32.6%	48.4%	81.0%
GXC60S-BG	BG	GX7S-E02	60	34.5%	48.8%	83.3%
GXC85S-BG	BG	GX10T-E02	85	35.0%	48.3%	83.3%
GXC100S-BG	BG	GX7S-LE02	100	35.2%	48.6%	83.8%
GXC130S-BG	BG	GX12T-E02	130	35.1%	48.8%	83.9%
GXC150S-BG	BG	GX10T-LE02	150	35.3%	48.8%	84.1%
GXC200S-BG	BG	GX12T-LE02	200	35.5%	48.3%	83.8%
GXC250S-BG	BG	GX13K-LE02	250	36.6%	46.6%	83.2%
GXC350S-BG	BG	GX20T-LE02	350	37.8%	46.3%	84.1%

OPEN SET COGEN - BG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
GXC35-BG	BG	GX5S-E02	35	33.7%	48.3%	82.0%
GXC50-BG	BG	GX5S-LE02	50	32.6%	48.4%	81.0%
GXC60-BG	BG	GX7S-E02	60	34.5%	48.8%	83.3%
GXC85-BG	BG	GX10T-E02	85	35.0%	48.3%	83.3%
GXC100-BG	BG	GX7S-LE02	100	35.2%	48.6%	83.8%
GXC130-BG	BG	GX12T-E02	130	35.1%	48.8%	83.9%
GXC150-BG	BG	GX10T-LE02	150	35.3%	48.8%	84.1%
GXC200-BG	BG	GX12T-LE02	200	35.5%	48.3%	83.8%
GXC250-BG	BG	GX13K-LE02	250	36.6%	46.6%	83.2%
GXC350-BG	BG	GX20T-LE02	350	37.8%	46.3%	84.1%

NOTES:

1. The above selection table is based on Natural gas and biogas fuel. All the above models also operate with BG, APG, LPG, the LHV of which is >30MJ/Nm³ or >6000Kcal/Nm³;
2. Frequency available: 50Hz and 60HZ;
3. 380V 415V Voltage Available;
4. Power Output based on ISO3046/1;
5. Electrical Efficiency based on 0.8 pf, ISO 3046/1;
6. Applicable Environment: -25~50°C, Height Altitude: <1000m;
7. Design Standard: ISO8525, GB2820.



ACG SERIES GAS CONGENERATION UNITS



ACG SERIES GAS CONGENERATION UNITS

The ACG series units have been specifically crafted for micro cogeneration purposes, making them ideal for a variety of locations including small hotels, villas, apartment complexes, office buildings, spas, hospitals, schools, supermarkets, and more. With a power capacity ranging from 10 to 50kW, these units are as versatile as they are efficient. Core components of the unit, like the engine and alternator, are autonomously designed and manufactured by PowerLink. These products are compact, highly efficient, environmentally friendly, durable, and offer flexibility with fuel types such as Natural Gas (NG) and Biogas (BG).

ACG SERIES SELECTION TABLE

3PH 50Hz 380V&415V

SOUNDPROOF COGEN - NG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
ACG10S-NG	NG	1K	10	32.2%	61.3%	93.5%
ACG20S-NG	NG	4Y	18	30.0%	63.2%	93.2%
ACG30S-NG	NG	5S	30	34.1%	61.4%	95.5%
ACG50S-NG	NG	7S	50	34.0%	61.5%	95.5%

SOUNDPROOF COGEN - LPG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
ACG10S-LPG	LPG	1K	10	32.2%	61.3%	93.5%
ACG20S-LPG	LPG	4Y	18	30.0%	63.2%	93.2%
ACG30S-LPG	LPG	5S	30	34.1%	61.4%	95.5%
ACG50S-LPG	LPG	7S	50	34.0%	61.5%	95.5%

SOUNDPROOF COGEN - BG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
ACG20S-BG	BG	4Y	20	33.3%	62.5%	95.8%
ACG30S-BG	BG	5S	30	35.0%	45.5%	80.5%
ACG50S-BG	BG	7S	50	36.0%	46.0%	82.0%

3PH 60Hz 208V; 380V&480V to TBA

SOUNDPROOF COGEN - NG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
ACG12S-6NG	NG	1K	12	32.2%	61.3%	93.5%
ACG24S-6NG	NG	4Y	21.5	30.0%	63.2%	93.4%
ACG36S-6NG	NG	5S	36	34.1%	61.4%	95.5%
ACG60S-6NG	NG	7S	60	34.0%	61.5%	95.1%

SOUNDPROOF COGEN - LPG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
ACG12S-6LPG	LPG	1K	12	32.2%	61.3%	93.5%
ACG24S-6LPG	LPG	4Y	21.5	30.0%	63.2%	93.4%
ACG36S-6LPG	LPG	5S	36	34.1%	61.4%	95.5%
ACG60S-6LPG	LPG	7S	60	34.0%	61.5%	95.1%

SOUNDPROOF COGEN - BG

PG Model	Fuel	Gas engine Model	Output, KWe	Efficiency		
				Electricity Efficiency	Heating Efficiency	Total Efficiency
ACG24S-6BG	BG	4Y	21.5	30.0%	63.2%	93.4%
ACG36S-6BG	BG	5S	36	35.0%	45.0%	80.0%
ACG60S-6BG	BG	7S	60	36.0%	46.0%	82.0%

NOTES:

1. The above selection table is based on Natural gas and biogas fuel. All the above models also operate with BG, APG, LPG, the LHV of which is >30MJ/Nm³ or >6000Kcal/Nm³;
2. Frequency available: 50Hz and 60Hz;
3. 380V 415V Voltage Available;
4. Power Output based on ISO3046/1;
5. Electrical Efficiency based on 0.8 pf, ISO 3046/1;
6. Applicable Environment: -25~50°C, Height Altitude: <1000m;
7. Design Standard: ISO8525, GB2820 .



POWERLINK GX AND ACG SERIES GAS ENGINES

PowerLink's GXC and ACG series gas engines are currently among the most economical gas engines globally. Keeping in mind the emission standards and the diverse needs of our professional customers globally for gas generator set applications, we've developed core components that offer high performance at a cost-effective price. These PowerLink gas engines, ranging in power from 10KWe to 350KWe, are produced by highly regarded engine manufacturers as per PowerLink's application requirements and performance parameters.

Further, PowerLink develops and integrates ECU electronic parts tailored to the engine's specific application requirements. Post rigorous testing, these engines are incorporated into gas-fired generator units and cogeneration units, ready to be shipped to various regions and countries. They are primed to generate energy and cater to production needs.

Our products not only satisfy the standby power market's requirements but are also engineered for continuous operation scenarios. Upon long-term operation, their outstanding performance and stable operation truly shine through.

Technology

Lean combustion control technology of engine.

Full authority engine electronic control unit (ECU).

Water-to-air and air-to-air intake cooling enhance engine energy efficiency.

Four valve cylinder heads. Highly efficient engine cooling system.

Customer Benefits



HIGH ENERGY CONVERSION EFFICIENCY

As power density increases, the need for a smaller capacity engine is met, which consequently brings down installation costs. The enhanced power expansion feature ensures that all our engine models deliver higher power output, catering to short-term power needs, enhancing torque response, and improving the overall productive power of the machine. The optimization of low-speed torque amplifies the torque at lower engine speeds, resulting in enhanced low-speed operation.

With various rated speeds, the engine's flexibility is improved and engine noise is reduced. Moreover, our engines comply with emission regulations without compromising their performance. This showcases our commitment to providing environmentally friendly power solutions without sacrificing efficiency and power.



MANUFACTURING CAPABILITY OF THE GX AND ACG SERIES GAS ENGINES

Boasting a compact structure, lightweight design, and small size, our engines are conveniently low-noise and feature an intuitive fault diagnosis system for easy maintenance.

All components are crafted using high-precision CNC machinery to ensure the highest quality.

Our engines have demonstrated over a decade of stable operation, capable of handling 100% sudden load changes, and offer superior exhaust emission standards. Equipped with a specialized second-generation ECU electronic control system, our engines are reliable, fuel-efficient, and designed to last.

Leveraging 20 years of engine manufacturing experience, we offer advanced technology crafted through mass production methods, ensuring consistent and high-quality outputs.



GR2.7

GR3.0

GX5S

GX7S

GX10T

GX12T

GX13K

GX11F

GX17

GX25

1K

4Y

5S

7S

Product Models

Cooling Systems

The horizontal remote heat dissipation system is designed on 40°C environment temperature, and the integrated radiator is designed on 50°C environment temperature.

Modular design of the Cooling pack. The high-efficiency radiator core with small volume and light weight.



Fuel system

Lean combustion control technology. Closed-loop combustion control system.

Second generation ECU control unit. Excellent combustion quality and low exhaust emission.



Lubrication System

Lubricating oil filtration system can filter the impurities in the engine, prevent the deterioration of the oil, and minimize the wear of various components during operation.



Anti-corrosive Coating

Appearance baking paint. Two-layer coating. Wear-resistant and scratch resistant. Special anti-corrosion process.



POWERLINK ALTERNATOR

Main Features

PowerLink alternators are manufactured by professional alternator manufacturers. These reliable alternators are manufactured based on the professional requirements of PowerLink, from materials, manufacturing process to special requirements of environmental applications, reflecting PowerLink's understanding of technology and quality. These parameters are not limited to the following:

- Ambient temperature of 40oC and H-class temperature rise
- Port standard anti-corrosion process
- Copper quality of winding
- Quality of silicon steel sheet
- 2 times vacuum paint-dipping process
- 2 / 3 winding pitch, meeting G99 certified power output quality
- Automatic voltage regulation AVR device, PMG standard configuration for power over 500 KVA and sudden load voltage fluctuation not more than 1%
- More than 50000 hours of stable and reliable operation history data
- The steady rise in our annual production to 20,000 sets has led to an increase in our market share



Technology

Stable voltage

PowerLink alternator adopts the super long-life thyristor voltage regulation (AVR) as the standard configuration. It directly controls the field current of the exciter, so that the voltage at the alternator end can be maintained stable when the generator load changes. In addition, digital AVR and permanent magnet generator (PMG) are optional.

Conversion efficiency

The whole alternator is a salient pole rotor. The damping winding is integrated with the rotor core. The magnetic field winding is directly wound and filled with thermosetting epoxy resin. It has excellent electrical performance, mechanical strength and high conversion efficiency.

Heat dissipation

The alternator is directly cooled by the shaft fan in structure, which has small volume and high heat dissipation efficiency.

Electrical safety

The alternator base and outlet box are made of steel plate, the end cover is made of high-strength cast iron, and the alternator meets the requirements of NEMA and IEC.

Insulation

The winding adopts 200-degree high temperature resistant enameled wire, insulating material and insulating paint, and the long-term and durable insulation structure of the motor makes the safe and lasting operation of the alternator in the humid, vibration and impact environment.

Confidence

PowerLink alternators can meet the continuous operation needs of customers, with optional 36-month super long quality assurance.

Customer Interests

Conversion efficiency

More than 20 years of alternator design and manufacturing experience provides higher efficiency.

Small volume

Excitation, power generation and fan are integrated, with smaller volume and greater power, which effectively reduces the installation cost.

Power range increase

The maximum power range is increased to 1000 KW.

Voltage stability

0-100% load fluctuation, voltage transformation $< \pm 1\%$.

Insulation grade

Vacuum paint dip, H-class insulation grade, CE, UL and CSA certification, safety assurance.

Cost control

Large scale production can effectively reduce manufacturing costs and have cost-effective performance.

Flexible control

Independent island operation, parallel operation and grid connected operation ,plug and play.

Worry-free aftersales

Extra long warranty period of 36 months is optional.

Introduction to Production Process

Winding

Winding installation

Crimping

Paint dip

Dry

Assembling

Test

Packing



SALES AND SERVICE SUPPORT



WARRANTY MANAGEMENT

Quality is synonymous with dependability, and it is for this reason that our products consistently receive glowing reviews from our customers. Our GXC, ACG series CHP unit has earned a reputation for its excellent value for money, steady performance, and trustworthy quality.

Our warranty covers a period of 12 months or 8000 hours following the commissioning, or 18 months from the date of delivery, whichever comes first. For additional details, we encourage you to consult our Warranty Manual.



COMMITTED TO CUSTOMER SATISFACTION

Should you encounter any difficulties with our equipment, our Warranty department is ready to showcase another dimension of our commitment to reliability, quality, and customer satisfaction. Our dedication to superior manufacturing technology doesn't just end with production; it extends into all aspects of our service, ensuring your experience is nothing short of excellent.



PART SUPPLY



The part management department's system diligently records the specifics of each component in all our sold products. By referring to the replacement cycle table for each part, we can promptly dispatch the necessary components to you. This vast information management system has been established with the aim to guarantee our efficiency and uphold customer satisfaction. For further information, please reach out to our team at parts@powerlinkworld.com or call us directly.



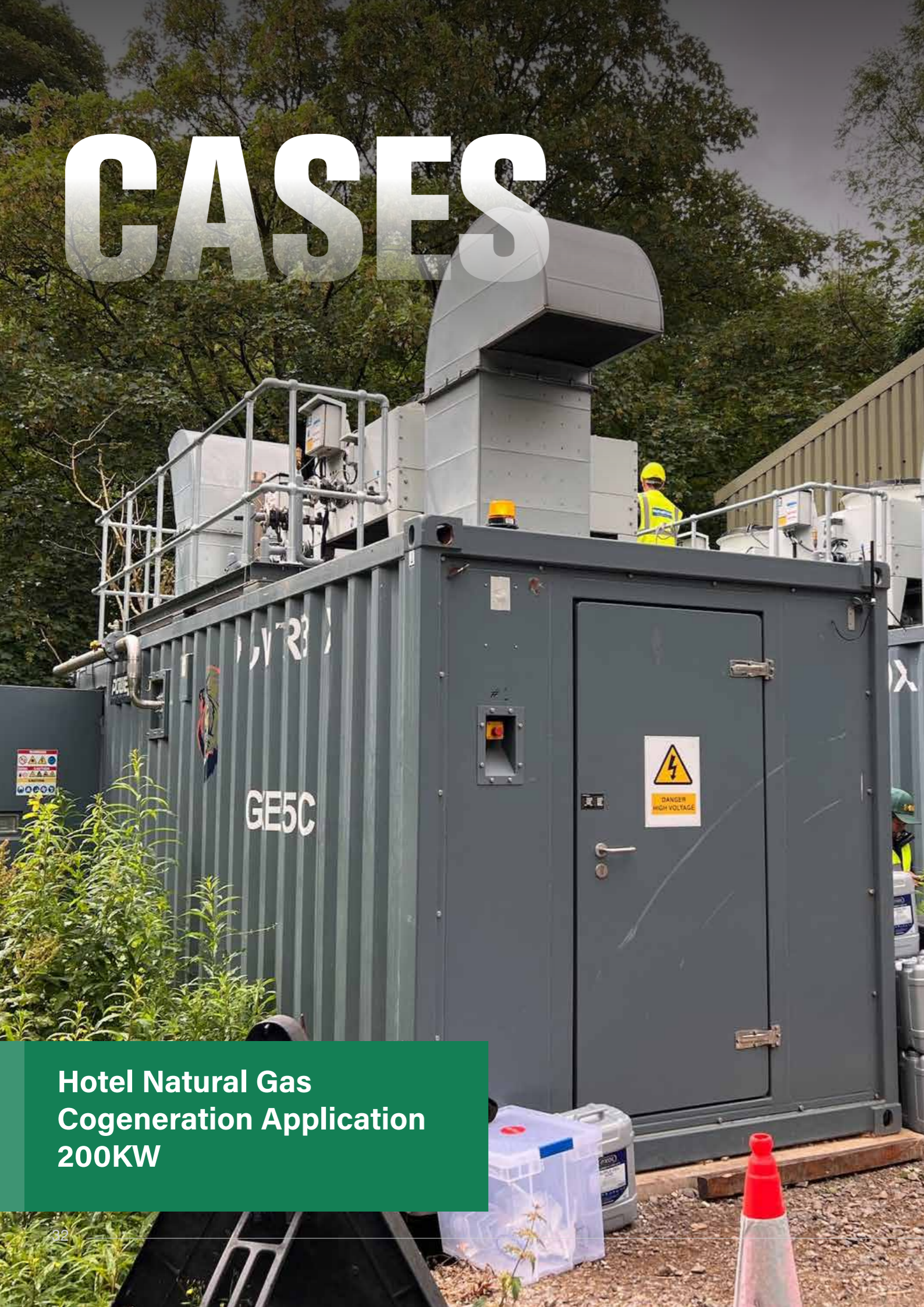
The distinction between a superb genset manufacturer like PowerLink and merely a competent one lies solely in manufacturing technology. At PowerLink, we are relentless in our pursuit of excellence in genset production.

To witness state-of-the-art equipment, stringent engineering methodologies, and the finest practices, we cordially invite you to visit our factory. Here, you'll be privy to every facet of our manufacturing process.

OUR COMMITMENT TO MANUFACTURING TECHNOLOGY ENABLES US TO MAKE EXCELLENT GENERATOR SETS.



CASES



**Hotel Natural Gas
Cogeneration Application
200KW**



**Factory CCHP Application
200KW**

Farm Biogas
Cogeneration
Application 500kw



Agriculture Biogas Cogeneration
Application 100KW



Farm Biogas Cogeneration
Application 500KW



If there is data change without notice
and need more information, please
contact us or your local agents.

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