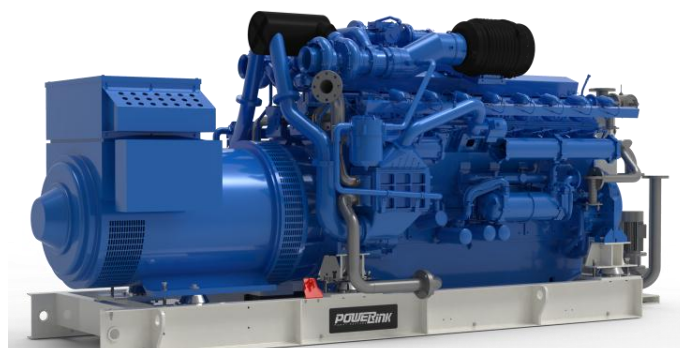


Standard Basic Module -Open Type

- Highly efficient gas engine
- AC synchronous alternator
- Gas safety train
- Cooling system suitable for ambient temperature up to 50°C
- Advanced engine control system, including: ignition system, detonation control system ,speed control system , air/fuel ratio control system and cylinder temp. protection system
- Strict shop test for all gensets
- Industrial silencer reduces the noise by 12-20dB(A)
- Integrated the control & switch cabinet
- Multi-functional control system with easy operation
- Data communication interfaces integrated into control system
- Monitoring battery voltage and charging from mains
- Bus interface for connecting to higher level control unit



Structure and control cabinet

Structure Type	Open
Spraying Process	High quality powder coating
Electrical control cabinet	Integrated, IP54
Noise level@ 1m, dB(A)	107.8
@7m, dB(A)	92.1
@10m, dB(A)	85.8

Dimension and weight

Dimension (LxWxH) , mm	3745×1300×2050
Weight, kg	4000

Special statement :

- 1、 The technical data is based on a gas mixture of 60% methane and 40% carbon dioxide with a calorific value of 6,0 kWh/Nm³ and a methane no. > 100.
- 2、 The technical data is measured in standard conditions:
Absolute atmospheric pressure: 100kPa
Ambient temperature : 25°C
Relative air humidity : 30%
- 3、 Rating adaptation at ambient conditions acc to DIN ISO 3046/1.
The tolerance for the specific fuel consumption is + 5 % at rated output.
- 4、 Technical data above are just for standard product ,and may be subject to change. As this document is used only for presale reference, take the specification supplied by PowerLink before ordering as final.

Electric data @50Hz

Voltage-V	Power-kW	Efficiency-%	Current-A
380	1000	38.1	1899
400	1000	38.1	1804
415	1000	38.1	1739
440	1000	38.1	1640

Fuel and emission

Fuel type	Biogas
Fuel composition	60%-CH ₄ /40%-CO ₂
Methane number	MN >100
Excess air factor (Lambda)	1.55
Fuel consumption @100% load, m ³ /h	438
Supply gas pressure range (gage pressure), kPa	10~20
Emission without catalytic converter	
NO _x , mg/Nm ³	<500mg/Nm ³
CO , mg/Nm ³	<650mg/Nm ³
HCHO (formaldehyde) , mg/Nm ³	<60mg/Nm ³
NMHC , mg/Nm ³	<150mg/Nm ³
Emission with catalytic converter(optional)	
NO _x , mg/Nm ³	≤250 mg/Nm ³

GXE1000-BG

BiogasGenset

Standard Basic Module + Acoustic Attenuated Container (Optional)



Dimension and Noise Level

Optional container (mm) (customized container modeling service available)	<input type="checkbox"/>	12192*2438*2896
	<input type="checkbox"/>	12192*3000*2896
	<input type="checkbox"/>	13500*3000*2896
	<input type="checkbox"/>	15000*3200*3000
Noise Level@ 1m, dB(A)		86
@ 7m, dB(A)		75
@ 10m, dB(A)		70

- Outdoor application enabled, weatherproof and dustproof, corrosion preventive Environmental friendly low emission
- Modular designed and manufactured for plug and play Low noise does not affect the surrounding environment



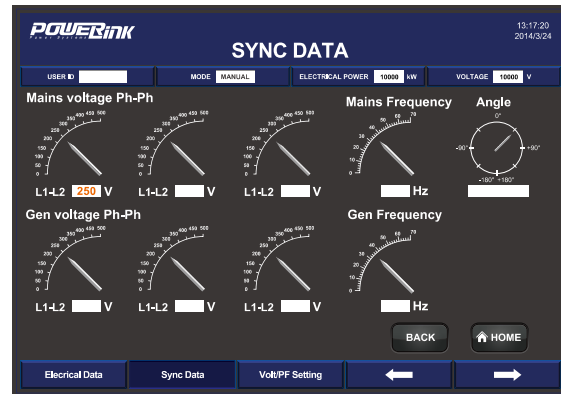
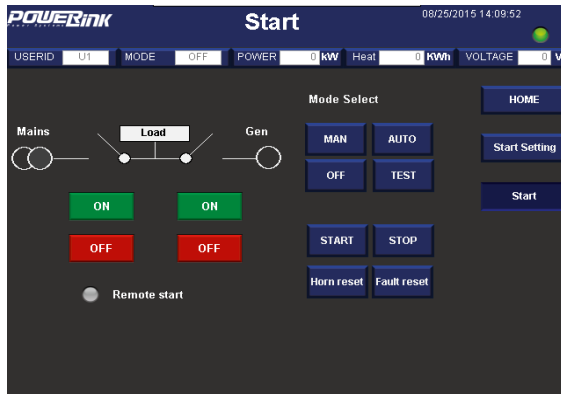
Genset performance data and manufacturing technology

Genset model	GXE1000-BG	Telephone interference factor(TIF)	≤50
Frequency(Hz)	50	Telephone harmonious factor(THF)	≤2% , as per BS4999
Electrical output power (kW)	1000	<p>Manufacturing technology</p> <ul style="list-style-type: none"> ● Special welded base frame, inner vibration isolators and design for whole lifting ● With high quality paint, enduring brightness as well resistance against abrasion and defacing ● Installation manual, operation and maintenance manual circuit diagram <p>Standards and certificate</p> <ul style="list-style-type: none"> ● ISO3046 , ISO8528 , GB2820 ● BS5000PT99 , AS1359 , IEC34 ● ISO9001:2008 quality system certification 	
Genset electrical efficiency	38.1%		
Overload runtime at 1.1xSe(hour)	1		
Steady-state voltage deviation	≤±1%		
Transient-state voltage deviation	-15%~20%		
Voltage recovery time(s)	≤4		
Voltage unbalance	1%		
Steady-state frequency regulation	±0.5%		
Transient -state frequency regulation	±5%		
Frequency recovery time(s)	≤3		
Steady-state frequency band	0.5%		
Recovery time response(s)	0.5		

Gas engine		AC alternator	
Brand	PowerLink	Brand	PowerLink
Model	GX80C-LE02G	Model	PL7A
NO. of cylinders	12	Rated output power @400V (kW)	1162
Cylinders arrangement	In-line	Power factor	0.8
Bore x Stroke (mm)	200x210	Rated current @400V (A)	2097
Displacement (L)	79.17	Excitation system	PMG
Cooling system	Water cooled	THF (BS EN60034- 1)	<2%
Rated speed (rpm)	1500	TIF (NEMA MG 1-22)	<50
Rated output power (kW)	1000	Winding material	100% copper
Excess air factor	1.63	Wiring connection	Star
Intake system	Turbocharged, intercooled	Rotor insulation class	H
Lube oil consumption (kg/h)	0.3	Winding pitch	2/3
Combustion type	Lean burn	A.V.R. model	MX341
Battery voltage	24V	Voltage fluctuation(no load to full load)	± 0.5%
Coolant type	Glycol mixture	Housing protection	IP23
Gas consumption(m³/h)@ 100%load	438	Excitation method	Brushless
75%load	325	Rated ambient temperature(°C)	40
50%load	226	Rated stator temperature rise(°C)	125

PCC-300 控制系统

采用开放的系统，触摸屏显示，集发动机保护和控制、通讯、并机并网及 CHP 控制等各项功能于一体。



特点

- 发动机监控：冷却液、润滑油、排气、蓄电池
- 燃气进气回路监控：压力、温度、CH4含量
- 自动并联和功率分配
- 电压和PF控制
- 发电机参数：U、I、Hz、kW、kVA、kVAr、PF、kWh、kVAh
- 市电参数：U、I、Hz、kW、kVAr、PF
- 支持基于RS232和RS485接口的Modbus协议通讯
- SMS短信息服务
- 以太网连接和USB 2.0接口
- 10英寸触摸屏监控
- 网络监控、自动定位和云通讯
- 1000条历史记录

主要优点

- 符合客户确切需求
- 提供完整的控制解决方案
- 方便远程监控和服务
- 简化发动机起/停手动控制工作
- 增强机组稳定性和安全性

标准保护功能

发电机保护

- 2x逆功率
- 2x过载
- 4x过电流
- 1x过电压
- 1x欠电压
- 1x过/欠频率
- 1x电流不平衡

母排/市网保护

- 1x过电压
- 1x欠电压
- 1x过/欠频率
- 1x相序保护
- 1xROCOF报警

标准控制功能

功率控制

- RPM控制(同步)
- 功率控制(并网)
- 负荷分配(孤岛)

电压控制

- 电压追踪(同步)
- 电压控制(孤岛)
- 功率因数控制(并网)
- 无功分配(孤岛)

发动机保护

- 常规或自定义的各种保护功能
- 监测

润滑油控制

- 自动加注机油系统
- 告警及监测

阀门控制

- 冷却系统
- 加热系统
- 紧急散热器

水泵控制

- 冷却系统
- 紧急散热器

风扇控制

- 机房通风
- 散热器风扇
- 紧急散热器风扇

Standard configuration

Engine	Alternator	Canopy and base	Electrical cabinet
Gas engine Ignition system Lambda controller Speed control system Electrical start motor Battery system Detonation control system Cylinder temp. protection system Lockable isolator switch Turbocharger & intercooler	AC alternator H class insulation IP23 protection AVR voltage regulator PMG	Steel monocoque base frame Engine bracket Vibration isolators Alternator base	GCCcontrol system LCD screen Main circuit breaker Electrical switch cabinet Communication interfaces Mains float charger
Gas supply system	Lubrication system	Standard voltage	Induction/ exhaust system
Gas safety train Air/fuel mixer Throttle valve Flame arrester	Oil filter Daily auxiliary oil tank New and used oil tank (Only applicable to container , two inch with the daily oil tank)	380/220V 400/230V 415/240V 440/254V	Air filter Exhaust silencer Exhaust bellows Gas leakage protection(Only applicable to canopy and container)
Cooling system	Service and documents		
Intercoolerradiator Jacket water radiator Circulation coolant pump Coolant thermostatic valve Axial flow fan	Tools package Installation and operation manual Maintenance manual Software manual Parts manual	Engine operation and maintenance manual Gas quality specification Control system manual After service guide Standard package	

Optional configuration

Engine	Alternator	Lubrication system
Jacket water heater	Space heater Treatments against humidity and corrosion	
Electrical system	Gas supply system	Service and documents
RCD ATS control cabinet Thermal power gauge Electric power gauge	Gas flow gauge Emergency pressure relief torch Refrigerated gas drier Water separator Gas compressor Gas purification device	Service tools Maintenance and service parts
Voltage	Exhaust system	Exhaust gas using
220V 230V 240V	Three-way catalytic converter	Exhaust gas evaporator LiBr refrigerator