



PCC565B

Prime Power: 400KW/500KVA Standby Power: 450KW/563KVA Voltage: 400V

Powered by Cummins QSK19-G13 Engine

Genset Performance

■ 230/400V, 50Hz, 0.8PF, 3 Phases 4 wires

■ Frequency drop ≤3%

■ Voltage regulation ≤0.3%

■ The steady state frequency ≤0.5%

■ The steady state voltage deviation $\leq \pm 1\%$

■ The transient frequency deviation ≤+10% ≤-15%

■ The transient voltage deviation ≤+20% ≤-15%

■ Frequency recovery time ≤3S

■ Voltage recovery time ≤1S(Voltage ±3%)

THF (Telephone Harmonic Factor) <3</p>

TIF (Telephone Influence Factor) <50
 Comply to Standard NEMA MG1-22.43

Built-in vibration isolator with high performance on shock absorption.

Standard Configuration

- Cummins Engine
- Brushless synchronous alternator
- POWERTEC intelligent controller
- 40°C standard ambient temperature (50°C Optional)
- Circuit breaker (3P)
- Float battery charger
- Battery connect wire
- Steel base frame
- Silencer, bellows, exhaust bend
- Manual book and files

Optional Items

- Starting batteries
- Fuel tank
- Oil-water separator
- Sensor for low coolant level, low fuel/oil level
- Automatically monitoring & controlling system of city power
- Coolant heater
- Oil heater
- Heat exchanger--Water cooled tower system
- Soundproof canopy
- Trailer
- Design and construction of environmental protection engineering for the Genset room

1 / 5 PGS: PCC565B 12/2023

Equipment Instruction



Diesel Engine

- Model: QSK19-G13
- Structure: Replaceable wet cylinder liner, good heat dissipation effect, easy to replace; all model parts have strong versatility, high degree of serialization, and easy maintenance; both the cylinder block and cylinder head adopt built-in pressure lubrication oil passages, with compact structure and easy to troubleshoot Low rate.
- Intake and exhaust: The efficient Holset exhaust gas supercharger further improves combustion; the pressure-type pulse exhaust pipe can make full use of exhaust gas energy and improve engine efficiency; intercooling tezchnology ensures better fuel economy and emissions.
- Cooling system: forced water cooling by gear centrifugal water pump, large flow water channel design, good cooling effect; spin-on water filter and special DCA additive can effectively prevent rust and cavitation, control coolant acidity and remove impurities.
- Fuel system: Using the world's leading high-pressure common rail fuel system and fully electronic control module, ultra-high fuel injection pressure.
- Lubricating oil system: pre-lubrication system, Centriguard centrifugal filter and CENTINEL continuous oil renewal system, two-stage combined Fleetguard oil filter, which can obtain a longer maintenance cycle and reduce theengine startup failure rate.
- Emissions compliance:

The improved combustion chamber shape allows the engine to achieve excellent emission levels without the need for post-processing, and has passed China's non-road stage three emission certification.

Alternator

- Optional brands: Stamford / Marathon / Faraday / Engga / Mecc Alt
- Brushless, 4 pole rotating magnetic field, single bearing with protective cover.
- Insulation: H Class.
- IP Class: IP23
- Cooling system
- AC exciter, rotate rectifying
- Rotor and exciter made with high temperature insulating resin, to satify tough environment.
- Rotor dynamic balancing complys for BS5625, class 2.
- Sealed with advanced lubricating grease to prolong life of bearing.



2 / 5 PGS: PCC565B_12/2023

Intelligent Control System



Standard

- 3 phases voltage: Ua, Ub, Uc
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature °C display
- Oil pressure OP
- Engine speed

- 3 phases current: La, Lb, Lc
- Active power PA
- Power factor PF
- Temperature °C display
- KPa/Psi/Bar display
- Battery voltage V
- Running Hour
- Starting timer:(999999)



Standard Protection

Genset Protection

Programmable I/O signal

Engine Protection

- Stop for over speed
- Low oil pressure
- High Coolant temperature
- Sensor fail

Alternator Protection

- Over Voltage
- Over current
- Voltage signal lost

Control System Components

- Manual/auto/stop/start
- Setting button
- Fault status indicators

- Emergency stop
- Alarm for low/high battery voltage
- Low battery voltage
- Fail to start/Cranking fail
- Over Voltage
- Over frequency
- Under frequency
- Screen menu selection button
- Emergency stop button
- Digital displayer



Communication Interface

(Option)

International standard MODBUS communication protocol RS232/ RS485 is suitable for remote control and monitor;
It is easy integrated with SCADA;

3 / 5 PGS: PCC565B 12/2023

Data sheet of Genset



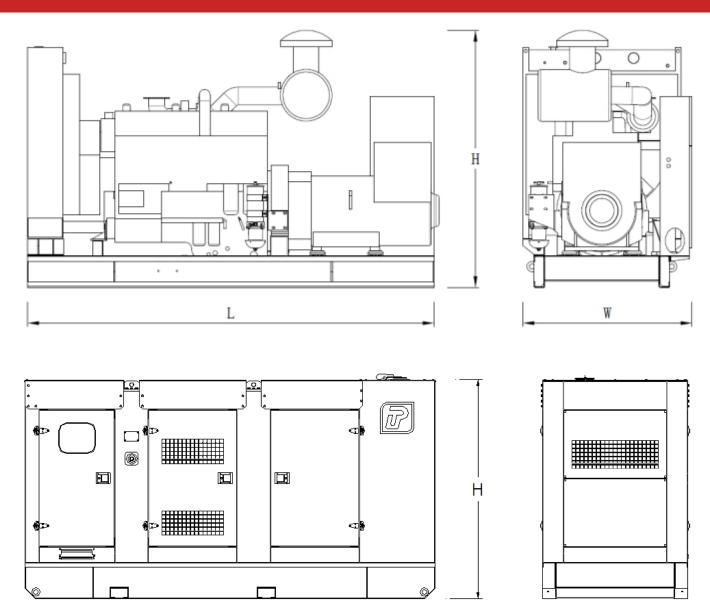
Model	 Genset				
Standby Rating (kw)					
Rate voltage(V)	Prime Rating (kw)	400			
Rate current(A) 722 Power factor 0.8 Frequency(Hz) 50 Engine Engine Engine Engine OSK19-G13 Gross Engine output-Prime (kw) 451 Gross Engine output-Standby (kw) 501 Bore * stroke (mm) 159*159 Cylinders and structure 6 in line Displacement(Liter) 18.9 Compression Ratio 15.8:1 Intake way Turbocharged and Charge Air Cooled Max intake resistance (KPa) 6.2 Air intake (m3/h) 2376 Max exhaust back pressure (KPa) / Exhaust gas flow (m3/h) 5850 Exhaust temp (*C) 478 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature (*C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (*C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class	Standby Rating (kw)	450			
Power factor 0.8	Rate voltage(V)	400			
Engine Cask Cask	Rate current(A)	722			
Engine Engine Cask Cas	Power factor	0.8			
Engine Model QSK19-G13	Frequency(Hz)	50			
Gross Engine output-Prime (kw)	Eng	ine			
Gross Engine output-Standby (kw) 501	Engine Model	QSK19-G13			
Bore * stroke (mm)	Gross Engine output-Prime (kw)	451			
Cylinders and structure 6 In line Displacement(Liter) 18.9 Compression Ratio 15.8:1 Intake way Turbocharged and Charge Air Cooled Max intake resistance (KPa) 6.2 Air intake (m3/h) 2376 Max exhaust back pressure (KPa) / Exhaust gas flow (m3/h) 5850 Exhaust temp (°C) 478 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature(°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter	Gross Engine output-Standby (kw)	501			
Displacement(Liter)	Bore * stroke (mm)	159*159			
Compression Ratio	Cylinders and structure	6 In line			
Intake way	Displacement(Liter)	18.9			
Max intake resistance (KPa) 6.2 Air intake (m3/h) 2376 Max exhaust back pressure (KPa) / Exhaust gas flow (m3/h) 5850 Exhaust temp (°C) 478 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature(°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Compression Ratio	15.8:1			
Air intake (m3/h) 2376 Max exhaust back pressure (KPa) / Exhaust gas flow (m3/h) 5850 Exhaust temp (°C) 478 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature(°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class	Intake way	Turbocharged and Charge Air Cooled			
Max exhaust back pressure (KPa) / Exhaust gas flow (m3/h) 5850 Exhaust temp (°C) 478 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature (°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Max intake resistance (KPa)	6.2			
Exhaust gas flow (m3/h) 5850 Exhaust temp (°C) 478 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature(°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Air intake (m3/h)	2376			
Exhaust temp (°C) 478 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature(°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Max exhaust back pressure (KPa)	1			
Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) Coolant capacity (L) Highest water temperature(°C) Minimum air opening to room (m2) Thermostat range (°C) Max oil temperature (°C) Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) Quiput Way Rated power factor Max voltage regulation Phase 3 Protection class H	Exhaust gas flow (m3/h)	5850			
Fan exhaust flow (m3/min) 960 Coolant capacity (L) 99 Highest water temperature(°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Exhaust temp (°C)	478			
Coolant capacity (L) Highest water temperature(°C) Minimum air opening to room (m2) Thermostat range (°C) Max oil temperature (°C) Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Max voltage regulation Phase 3 Protection class H	Cooling way	Water Radiator & Fan			
Highest water temperature(°C) 96 Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class	Fan exhaust flow (m3/min)	960			
Minimum air opening to room (m2) 3.3/2.7 Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Coolant capacity (L)	99			
Thermostat range (°C) 83-95 Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class	Highest water temperature(°C)	rater temperature(°C) 96			
Max oil temperature (°C) 121 Lubrication system oil capacity (L) 83 Rate load fuel consumption(L/H) 109.5 Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class	Minimum air opening to room (m2)	oom (m2) 3.3/2.7			
Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Exciter Max voltage regulation Phase 3 Protection class Insulation class H	Thermostat range (°C)	83-95			
Rate load fuel consumption(L/H) Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Exciter Max voltage regulation Phase 3 Protection class Insulation class H	Max oil temperature (°C)	121			
Standard Governor/Class CELECT Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Lubrication system oil capacity (L)	83			
Emission Certification China Tier 3 Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Rate load fuel consumption(L/H)	109.5			
Alternator Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Standard Governor/Class	CELECT			
Rated Voltage(V) 230/400 Output Way 3 Phases, 4 wires Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Emission Certification	China Tier 3			
Output Way Rated power factor Exciter Max voltage regulation Phase Protection class Insulation class O.8 Brushless, Self-exciter #1% #1% Plase 1 P21-23 H	Alternator				
Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H	Rated Voltage(V)	230/400			
ExciterBrushless, Self-exciterMax voltage regulation±1%Phase3Protection classIP21-23Insulation classH	Output Way	3 Phases, 4 wires			
Max voltage regulation±1%Phase3Protection classIP21-23Insulation classH	Rated power factor	0.8			
Phase 3 Protection class IP21-23 Insulation class H	Exciter	Brushless, Self-exciter			
Protection class IP21-23 Insulation class H	Max voltage regulation	±1%			
Insulation class H	Phase	3			
	Protection class IP21-23				
Controller	Insulation class	Н			
Controller					
Brand POWERTEC	Brand	POWERTEC			

4 / 5 PGS: PCC565B_12/2023

Dimension and Weight



W



Туре	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	3500*1560*2018	4000	_
Silent Type	4700*1700*2450	5950	1100

Contact Us

Powertec Generator System Inc.

Add: Danshui Yanna Industry Zone, Huiyang, Huizhou, Guangdong, China

Tel: +86 752-3911119 / 3911118

Fax: +86 752-3911110 **Web:** www.powertec.com

Web: www.powertec.com.cn
Email: powertec@powertec.com.cn

5 / 5 PGS: PCC565B_12/2023