POWERTEC
Powertec Generator System Inc.

Perkins

PPE165A

Prime Power: 120KW/150KVA Standby Power: 132KW/165KVA Voltage: 400V

Powered by Perkins 1106A-70TAG 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 ≤±1%
- The transient frequency deviation ≤+10% ≤-7%
- The transient voltage deviation ≤+20% ≤-15%
- Frequency recovery time ≤3S
- Voltage recovery time ≤1S(Voltage±3%)
- THF (Telephone Harmonic Factor) <3
- TIF (Telephone Influence Factor) <50
  Comply to Standard NEMA MG1-22.43
- Standard equipped with ambient temperature 40℃ Connecting radiator
- Built-in vibration isolator with high performance on shock absorption.
- Product standards: (1) GB/T 2820-2022 / IS08528:2018
  (2) GB/T 4712-2008 (3) YD/T 502-2020 (4)YD/T 1051-2018

Standard Configuration

- Perkins Engine
- Brushless synchronous alternator
- POWERTEC intelligent controller
- 40℃ standard ambient temperature （50℃ Optional）
- Circuit breaker（3P）
- Float battery charger
- Battery connect wire
- Steel base frame
- Silencer, bellows, exhaust bend
- Bottom fuel tank
- 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
- Silent type/Trailer
- Standardized container
- Design and construction of environmental protection; engineering for the Genset room.

Diesel Engine

- Model：1106A-70TAG
- Building upon Perkins proven reputation within the power generation industry, the 1100 Series range of ElectropaK engines now fit even closer to customers needs;
- In the world of power generation success is only gained by providing more for less. With the 1106A-70TAG Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership;
- 1100A units are designed for territories that do not require compliance to EPA or EU emissions legislation. These engines are assembled around optimal, efficient manufacturing processes with state-of-the-art technology. They are built to provide the exact power solution for customers who sell their applications into lesser regulated countries;

- Focusing on our common platform theme, changes to engine envelope dimensions and connection points have been kept to a minimum;
- The Perkins® 1106A-70TAG delivers up to 165 kVA standby at 50 Hz and 150 kWe standby at 60 Hz, providing greater productivity through an improved power to weight ratio;
- This world-class power density has been achieved in a 7 litre engine, using a mechanical fuel injection system; making this engine robust for all markets, with the ability to cope with the variation of fuel qualities around the world The 1106A has been designed for excellent load acceptance to ensure your facility is powered quickly at all conditions;
- Service intervals are set at 500 hours as standard;

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
- The stator winding is impregnated and the surface is covered with moisture-proof epoxy insulating paint.
- Rotor and exciter made with high temperature insulating resin, to satify tough environment.
- Rotor dynamic balancing complys for BS5625, class 2.5
- Sealed with advanced lubricating grease to prolong life of bearing.

Standard Meters

- 3 phases voltage: U_a, U_b, U_c
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature ℃ display
- Oil pressure OP
- Engine speed
- 3 phases current: L_a, L_b, L_c
- Active power PA
- Power factor PF
- Temperature ℃ display
- KPa/Psi/Bar display
- Battery voltage V
- Running Hour
- Starting timer:(999999)

Standard Protection Function

Genset Protection

- Programmable I/O signal
- Emergency stop

Engine Protection

- Stop for over speed
- Low oil pressure
- High Coolant temperature
- Sensor fail
- Alarm for low/high battery voltage
- Low battery voltage
- Fail to start/Cranking fail

Alternator Protection

- Over Voltage
- Over current
- Voltage signal lost
- Over Voltage
- Over frequency
- Under frequency

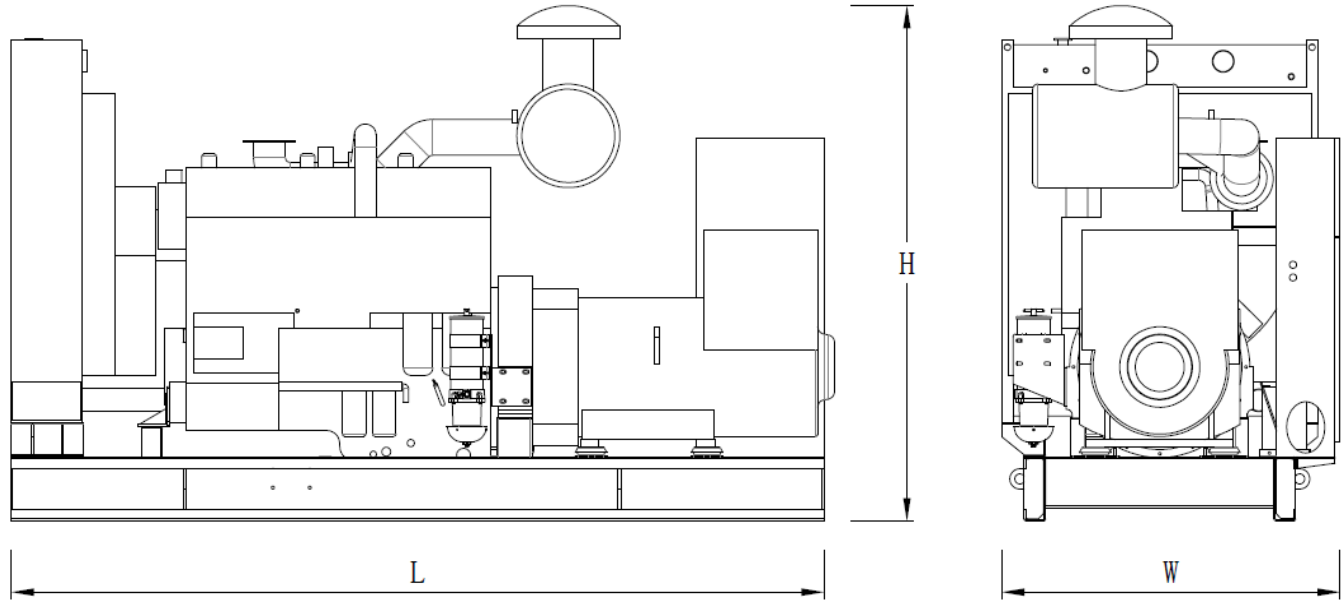
Control System Components

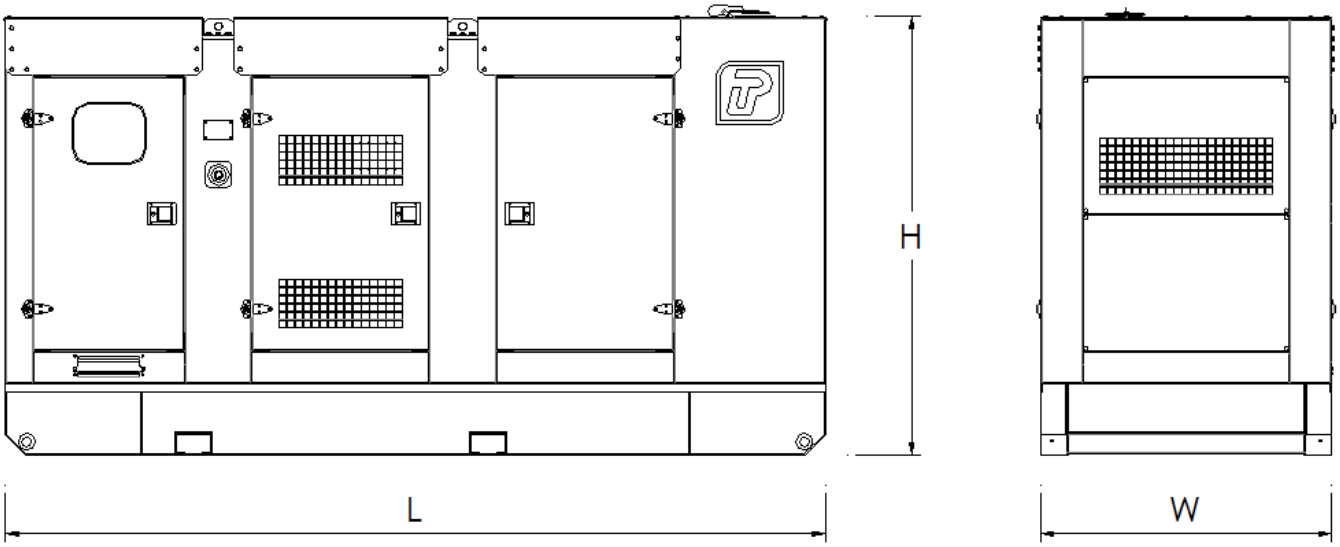
- Manual/auto/stop/start
- Setting button
- Fault status indicators
- Screen menu selection button
- Emergency stop button
- Digital displayer

Communication Interface （Option）

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

Genset	
Model	PPE165A
Prime Rating (kw)	120
Standby Rating (kw)	132
Rate current(A)	216
Power factor	0.8
Frequency(Hz)	50
Engine	
Engine Model	1106A-70TAG
Gross Engine output-Prime (kw)	131
Gross Engine output-Standby (kw)	144.1
Bore * stroke (mm)	105*135
Cylinders and structure	6 In line
Displacement(Liter)	7.01
Compression Ratio	16:1
Intake way	Turbocharged aftercooled
Max intake resistance (KPa)	5
Air intake (m3/h)	612
Max exhaust back pressure (KPa)	6
Exhaust gas flow (m3/h)	1427
Exhaust temp (℃)	484
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	282
Coolant capacity (L)	21
Highest water temperature(℃)	112
Minimum air opening to room (m2)	1.8/1.6
Thermostat range (℃)	85-95
Max oil temperature (℃)	125
Lubrication system oil capacity (L)	16.5
Rate load fuel consumption(L/H)	33.4
Standard Governor/Class	Mechanical speed regulation
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
Controller	
Brand	POWERTEC





Type	Dimension (mm)（L*W*H）	Weight (kg)	Fuel Tank Capacity (L)
Open Type	2462*971*1567	1600	250
Silent Type	2920*1100*1750	2350	300

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.cn
Email: powertec@powertec.com.cn