



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 $\leq \pm 1\%$

■ 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

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

Standard equipped with ambient temperature 40°C
 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°C standard ambient temperature (50°C 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.



Equipment Instruction



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.



Intelligent Control System



Standard Meters

- 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 Function

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;.

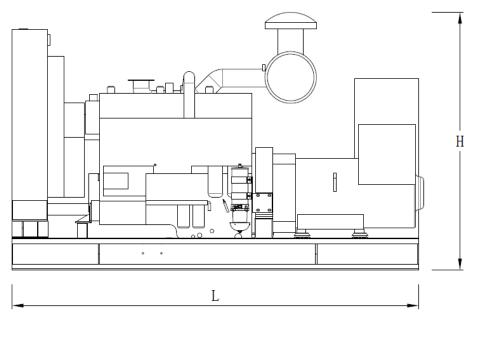
Data sheet of Genset

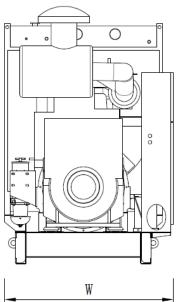


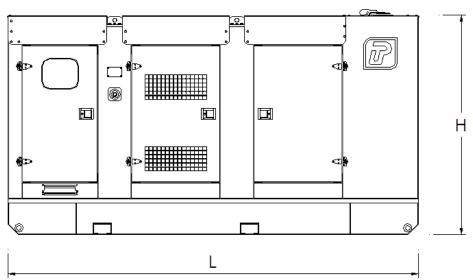
Model	Genset				
Standby Rating (kw)	Model	PPE165A			
Rate current(A)	Prime Rating (kw)	120			
Power factor	Standby Rating (kw)	132			
Engine Engine	Rate current(A)	216			
Engine Engine Engine Engine Engine Engine Model 1106A-70TAG Gross Engine output-Prime (kw) 131 131 131 135 135 144.1 105*135 Cylinders and structure 6 In line Displacement(Liter) 7.01 Compression Ratio 16:1 114.1 14:1 14:1 15:1 15:1 15:1 16:1	Power factor	0.8			
Engine Model	Frequency(Hz)	50			
Gross Engine output-Prime (kw) Gross Engine output-Standby (kw) 144.1 Bore * stroke (mm) Cylinders and structure Bisplacement(Liter) Compression Ratio Intake way Turbocharged aftercooled Max intake resistance (KPa) Air intake (m3/h) Exhaust gas flow (m3/h) Exhaust temp (**C) Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) Coolant capacity (L) Highest water temperature (**C) Max eil temperature (**C) Max oil temperature (**C) Aste load fuel consumption(L/H) Standard Governor/Class Rated Voltage(V) Phase Protection class Protection class Insulation class Insulati	Er	ngine			
Gross Engine output-Standby (kw)	Engine Model	1106A-70TAG			
Bore * stroke (mm)	Gross Engine output-Prime (kw)	131			
Cylinders and structure Displacement(Liter) Compression Ratio 16:1 Intake way Turbocharged aftercooled Max intake resistance (KPa) Air intake (m3/h) Exhaust gas flow (m3/h) Exhaust temp (°C) Highest water temperature(°C) Max will temperature (°C) Lubrication system oil capacity (L) Rated Voltage(V) Standard Governor/Class Rated Power factor Rated Power factor Max evhoust on the Max voltage regulation Phase Phase Pitroback Purbocharged aftercooled Turbocharged aftercooled Turbocharged aftercooled Fundamental factor Turbocharged aftercooled Turbocharged aftercooled Turbocharged aftercooled Fundamental factor	Gross Engine output-Standby (kw)	144.1			
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 IP21-24 Insulation class IP21-24	Bore * stroke (mm)	105*135			
Compression Ratio	Cylinders and structure	6 In line			
Intake way Max intake resistance (KPa) Air intake (m3/h) Air intake (m3/h) Bexhaust back pressure (KPa) Exhaust gas flow (m3/h) Cooling way Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) Exhaust temperature(°C) Minimum air opening to room (m2) Thermostat range (°C) Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class Rated Voltage(V) Output Way Rated power factor Max voltage regulation Exciter Max voltage regulation class Insulation class Insulation class Insulation class Insulation class Insulation class Insulation class Controller	Displacement(Liter)	7.01			
Max intake resistance (KPa) 5 Air intake (m3/h) 612 Max exhaust back pressure (KPa) 6 Exhaust gas flow (m3/h) 1427 Exhaust temp (°C) 484 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 282 Coolant capacity (L) 21 Highest water temperature(°C) 112 Minimum air opening to room (m2) 1.8/1.6 Thermostat range (°C) 85-95 Max oil temperature (°C) 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	Compression Ratio	16:1			
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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	Max intake resistance (KPa)	5			
Exhaust gas flow (m3/h) Exhaust temp (°C) 484 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 282 Coolant capacity (L) Highest water temperature(°C) Minimum air opening to room (m2) Thermostat range (°C) 85-95 Max oil temperature (°C) Lubrication system oil capacity (L) Rate load fuel consumption(L/H) 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 Phase 3 Protection class H Controller	Air intake (m3/h)	612			
Exhaust temp (°C) 484 Cooling way Water Radiator & Fan Fan exhaust flow (m3/min) 282 Coolant capacity (L) 21 Highest water temperature(°C) 112 Minimum air opening to room (m2) 1.8/1.6 Thermostat range (°C) 85-95 Max oil temperature (°C) 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	Max exhaust back pressure (KPa)	6			
Cooling way 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 Mechanical speed regulation Alternator Rated Voltage(V) Qutput Way Rated power factor Max voltage regulation Exciter Max voltage regulation Phase 3 Protection class H Controller	Exhaust gas flow (m3/h)	1427			
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 Mechanical speed regulation Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Max voltage regulation Exciter Brushless, Self-exciter Max voltage regulation Phase 3 Protection class IP21-23 Insulation class H Controller	Exhaust temp (℃)	484			
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 Mechanical speed regulation Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Max voltage regulation Exciter Brushless, Self-exciter Max voltage regulation Phase 3 Protection class IP21-23 Insulation class H Controller	Cooling way	Water Radiator & Fan			
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 Mechanical speed regulation Alternator Rated Voltage(V) Output Way Rated power factor Rated power factor Max voltage regulation Exciter Max voltage regulation Phase 3 Protection class Insulation class H Controller		282			
Highest water temperature(℃) Minimum air opening to room (m2) Thermostat range (℃) Max oil temperature (℃) Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class Mechanical speed regulation Alternator Rated Voltage(V) Output Way Rated power factor Exciter Max voltage regulation Phase Phase 3 Protection class IP21-23 Insulation class Lize 1.8/1.6 112 1.8/1.6 1.8/1.6 1.8/1.6 16.5 16.5 16.5 Mechanical speed regulation Alternator 230/400 0.8 Exciter Brushless, Self-exciter #1% Phase 3 Protection class IP21-23 Insulation class H		21			
Thermostat range (°C) Max oil temperature (°C) Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class Mechanical speed regulation Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Exciter Max voltage regulation Phase 3 Protection class Insulation class H Controller		112			
Max oil temperature (°C) Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class Mechanical speed regulation Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Exciter Max voltage regulation Phase Protection class Insulation class Insulation class Controller	Minimum air opening to room (m2)	1.8/1.6			
Lubrication system oil capacity (L) Rate load fuel consumption(L/H) Standard Governor/Class Mechanical speed regulation Alternator Rated Voltage(V) Output Way 3 Phases, 4 wires Rated power factor Exciter Max voltage regulation Phase 3 Protection class Insulation class Insulation class Controller	Thermostat range (℃)	85-95			
Rate load fuel consumption(L/H) Standard Governor/Class Mechanical speed regulation Alternator Rated Voltage(V) Output Way Standard Governor/Class Rated Power factor Rated power factor Exciter Max voltage regulation Phase Protection class Insulation class H Controller	Max oil temperature (℃)	125			
Standard Governor/Class Alternator Rated Voltage(V) Output Way Standard Factor Rated power factor Exciter Max voltage regulation Phase Protection class Insulation class Mechanical speed regulation 230/400 3 Phases, 4 wires 0.8 Brushless, Self-exciter #1% Phase 3 Protection class IP21-23 Insulation class H	Lubrication system oil capacity (L)	16.5			
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 Controller	Rate load fuel consumption(L/H)	33.4			
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	Standard Governor/Class	Mechanical speed regulation			
Output Way Rated power factor Exciter Max voltage regulation Phase Protection class Insulation class Controller	Alternator				
Rated power factor 0.8 Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H Controller	Rated Voltage(V)	230/400			
Exciter Brushless, Self-exciter Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H Controller	Output Way	3 Phases, 4 wires			
Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H Controller	Rated power factor	0.8			
Phase 3 Protection class IP21-23 Insulation class H Controller	Exciter	Brushless, Self-exciter			
Protection class IP21-23 Insulation class H Controller	Max voltage regulation	±1%			
Insulation class H Controller	Phase	3			
Controller	Protection class	IP21-23			
	Insulation class	Н			
Brand POWERTEC	Controller				
	Brand	POWERTEC			

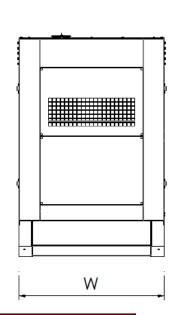
Dimension and Weight











Туре	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

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