# FP-220

Diesel Generators



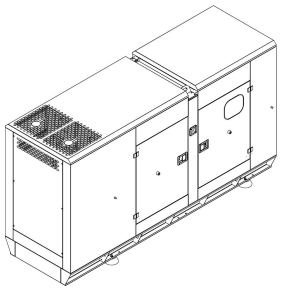
## GENERAL SPECIFICATIONS

| | | |
|---|---|---|
| Standby | kVA | 220 kVA |
| | kW | 176 kW |
| Prime | kVA | 200 kVA |
| | kW | 160 kW |
| Frequency | Hz | 50 Hertz |

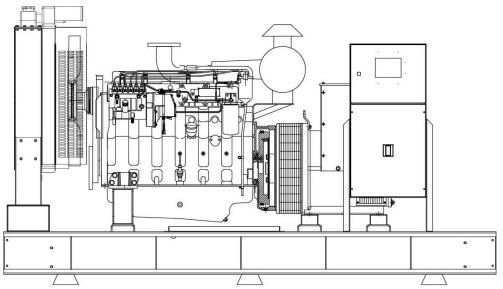
1 Standby power: Used as a backup to mains power, as an emergency power source under variable load, no overloading.
2 Prime Power: Continuous power source under variable load for 24/24 hours. 1/12 hour 10% overloading is permitted.

## DIMENSIONS AND WEIGHTS

WITH CANOPY



WITHOUT CANOPY



| | |
|---|---|
| Weight (With Canopy / Without Canopy) | 2220 (1890) kg |
| Width (With Canopy / Without Canopy) | 1000 (1000) mm |
| Length (With Canopy / Without Canopy) | 3150 (2550) mm |
| Height (With Canopy / Without Canopy) | 1810 (1900) mm |
| Fuel Tank Capacity | 220 L |

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Diesel Generators

## ENGINE

| | |
|---|---|
| Engine Brand | PERKINS |
| Engine Model | 1106A-70TAG4 |
| Number and Type of Cylinders | 6 Inline |
| Injection and System Type | Direkt |
| Compression Ratio | 16:1 |
| Diameter | 105 mm |
| Stroke | 135 mm |
| Cylinder Displacement | 7.1 L |
| Air Suction Power | Turbocharged & Air Charge Cooled |
| Rotational Speed | 1500 Revolutions per Minute |
| Crankcase Oil Capacity (Lt) | 18 L |
| Standby Power | 196.3 / 263 |
| Prime (PRP) | 178.9 / 240 |
| Fuel Type | Euro Diesel |
| Governor System | Electronic |
| Cooling Method | Water Cooled |
| Coolant Capacity | 22 L |
| Fuel Consumption at Full Load | 45.8 L |
| Fuel Consumption at 75% Load | 34.7 L |
| Fuel Consumption at 50% Load | 23.1 L |

## ALTERNATOR

| | |
|---|---|
| Frequency (Alternator) | 50 Hertz |
| Voltage | 400 Volt |
| Phase | 3 |
| Voltage Regulation | ±1% |
| Insulation Class | H |
| Protection Class | IP23 |
| Power Factor | 0.8 Ratio |

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## TECHNICAL SPECIFICATIONS

### DIESEL ENGINE

- PERKINS heavy duty diesel engine
- 12V / 24V starter motor and battery charging alternator
- Replaceable; air, fuel and oil filters
- Mechanical - Electronic governor control
- Tropical type radiator
- Flexible fuel hose
- Oil drain valve and extension hose
- Industrial type silencer and steel compensator
- Maintenance-free starter battery
- Engine block water heater
- 1500 rpm engine speed

### ALTERNATOR

- IP 23 Protection class
- H insulation class
- 50 Hz frequency
- 4-pole brushless synchronous type alternator
- Automatic voltage regulator (AVR)
- 400/230V A.C. output voltage - 1500 rpm

### CANOPY AND CHASSIS

- Design suitable for easy lifting and transport
- Cabin equipped with sound insulation
- Modular cabin design with easily removable nut-bolt system
- Lockable cabin doors
- Control panel viewable through transparent window
- Electrostatically powder coated, protected against external factors
- Emergency stop button
- Fuel tank within the chassis
- Anti-vibration mounts between engine-chassis and chassis-ground

### OPTIONAL EQUIPMENT

- Critical type silencer and super silent cabin
- Thermal magnetic switch (for automatic models)
- Sound insulation cabinet
- Trailer-mounted generator set
- Automatic fuel filling system
- Synchronization systems
- 3-pole / 4-pole power transfer panel
- Fuel heater, Oil heater
- External fuel tank and automatic fuel filling system
- Fuel-water separator filter
- Computer-controlled remote monitoring and control panel
- PMG Alternator




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# D 300

Internet Based Next Generation Generator Control Device




## CONTROL PANEL

### FEATURES

- Diesel and gas generator support
- Dual generator support, equal aging
- Multiple nominal charge definitions
- 400Hz generator support
- Contactor and motorized switch drive
- 400x measurement value event log
- Fine speed adjustment for some ECUs
- 4-quadrant energy meters
- All parameters changeable from front panel
- Automatic fuel pump control
- Mains energy meters
- 3-level program password
- Protection cancel feature
- Fuel filling counter
- 128x64 pixel graphic LCD
- Overpower protection
- Fuel consumption counter
- Language loading
- Reverse power protection
- Modern diagnostic page
- Current-voltage waveform
- Overcurrent IDMT protection
- Parameter setting via USB, RS-232 and GPRS
- Current-voltage harmonic analysis
- Load shedding, dummy load
- 16 Amp / 250V socket / plug outputs
- Multiple load shedding programs
- Free configuration software
- 8 programmable digital inputs
- Current unbalance protection
- Remote control via SMS
- 6 programmable digital outputs
- Voltage unbalance protection
- Ready for central monitoring
- 3 programmable analog inputs
- Fuel filling and theft alarms
- Mobile generator support
- CANBUS-J1939 & MPU input
- Battery-backed real-time clock
- Automatic GSM location detection
- 3 programmable service alarms
- Idle speed control
- GPS connection (RS232)
- Multiple automatic test programs
- Battery charging operation
- Software update via USB
- Weekly operation schedule
- War mode support
- IP65 protection (with gasket)

### MEASUREMENTS

- Mains & Generator FN/FF voltages
- Mains & Generator frequency
- Mains & Generator phase currents
- Mains & Generator neutral currents
- Mains & Generator, phase and total kW, kVA, kVAr, cos
- Engine Speed
- Battery Voltage

### FUNCTIONS

- AMF Device
- ATS Device
- Remote Start Device
- Manual Start Device
- Engine Control Device
- Remote Monitoring Panel

### COMMUNICATION

- USB Device
- J1939-CANBUS
- Location detection via GSM
- Internet central monitoring
- SMS message sending
- E-mail sending
- Free software: Rainbow Plus
- Modbus RTU (2400-57600baud)
- Modbus TCP/IP

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