

# **FP 22**

Diesel Generator













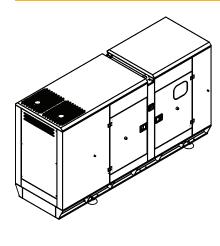




	GENERAL SPECIFICATIONS	
	kVA	22
Stand By Power	kW	17.6
Prime Power	kVA	20
Prime Power	kW	16
Frequency	Hz	50
Cooling System	Water Cooling	

- 1) Standby power: The max power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage. Overloading isn't permissible.
- 2) Prime Power: The maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load. Average load should be 70%. The generator can be overloaded 10% for 1 hour per 12 hrs.

## **DIMENSIONS & WEIGHT**

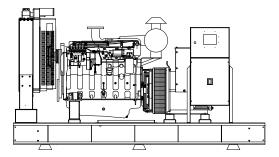


### **WITH CANOPY**

Length	Width	Height	Weight	Fuel Tank
L (mm)	W (mm)	H (mm)	(Kg)	Capacity
2000	900	1200	720	115

### **OPEN TYPE**

Length	Width	Height	Weight	Fuel Tank
L (mm)	W (mm)	H (mm)	(Kg)	Capacity
1650	900	1200	590	115



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# ENGINE

Engine	PERKINS		
Engine Model		404A-22G1	
Number of Cylinders		4 Inline	
Injection System		Indirect	
Compression Ratio		23 : 1	
Bore	mm	84	
Stroke	mm	100	
Displacement	lt	2.21	
Air Intake		Naturally Aspirated	
Speed (RPM)	rpm	1500	
Oil Capacity	lt	10.6	
Standby Power	kW/hp	20.6 /27.8	
Prime Power	kW/hp	18.7 / 25.2	
Fuel Type		Euro Diesel	
Governor System		Mechanical	
Cooling System		Water Cooling	
Coolant Capacity	lt	7	
	Full Load	5.3	
Fuel Consumption (It / h)	%75 Load	4	
	%50 Load	2.9	

# ALTERNATOR

Frequency	Hz	50
Power	kVA	22
Voltage	V	230 / 400
Nb of Phases		3
Aut. Voltage Regulator (AVR)		AS440
Voltage Regulation		±1%
Insulation Class		Н
Protection Standard		IP22-IP23
Power Factor	Cos	0.8



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### **TECHNICAL SPECIFICATIONS**

#### **ENGINE**

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

# **ALTERNATOR**

- IP 21-23 Protection Standard
- H Insulation Class
- 50 Hz Frequency
- 4 pole brushless synchronous type alternator
- Automatic Voltage Regulator (AVR)
- 400/230V AC Output Voltage 1500 rpm

### SOUND PROOF CANOPY AND CHASSIS

- Convenient design for easy lifting and carrying
- High standard sound proof canopy design
- Modular design with easily removable nuts bolts
- Lockable doors
- Transparent window for watching Control Panel
- Electrostatic powder painted, providing protection against harsh weather conditions
- Emergency STOP button
- Fuel tank inside the chassis
- Anti-vibration wedges (engine chassis and chassis ground)

### **OPTIONAL**

- Thermal magnetic CB (for automatic models)
- Super Silent Canopy
- Mobile Generator Sets
- Automatic fuel filling system
- Synchronization panel
- 3 Pole and 4 Pole ATS (Automatic Transfer Switch)
- Fuel Heater, Oil Heater
- External fuel tank and automatic fuel filling system
- Fuel water separator filter
- Remote monitoring and control system



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**CONTROL PANEL** 

# D 300 Web based **Next Generation** Controller



#### **SPECIFICATIONS**

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- 16Amp MCB & GCB outputs
- 8 configurable digital inputs
- 6 configurable digital outputs
- 3 configurable analog inputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple automatic exerciser
- Weekly operation schedule
- Dual mutual standby with equal aging of gensets
- Manual "speed fine adjust" on selected ECUs
- Automatic fuel pump control
- Disable protections feature
- Excess power protection
- Reverse power protection
- Overload IDMT protection

- · Load shedding, dummy load
- Multiple load management
- Current unbalance protection
- Voltage unbalance protection
- Fuel filling & fuel theft alarms
- Battery back-up real time clock
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel filling counter
- Fuel consumption counter
- Modem diagnostics display
- Configurable through USB, RS-232 and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring
- Mobile genset support
- Automatic GSM geo-location
- GPS connectivity (RS232)
- Easy USB firmware upgrade
- IP65 rating with optional gasket

#### **MEASUREMENTS**

- Mains & genset PN/PP voltages
- Mains & genset frequency
- Mains & genset phase currents
- Mains & genset neutral currents
- Mains & genset, phase & total, kW, kVA, kVAr, pf
- Engine speed
- Battery voltage

#### **FUNCTIONALITIES**

- AMF unit
- · ATS unit
- Remote start controller
- Manual start controller
- Engine controller
- Remote display panel

#### COMMUNICATION

- USB Device
- RS-232 (2400-57600baud)
- J1939-CANBUS
- Geo-locating through GSM
- GPS support (RS-232)
- Internet Central Monitoring
- SMS message sending
- · E-mail sending
- Free PC software: Rainbow Plus
- Modbus RTU
- Modbus TCP/IP

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