

FR 110 Diesel Generator



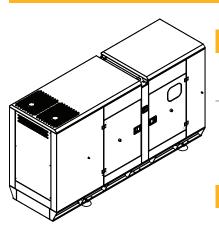
CE



GENERAL SPECIFICATIONS kVA 110 Stand By Power kW 88 kVA 100 **Prime Power** kW 80 Frequency 50 Ηz **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.

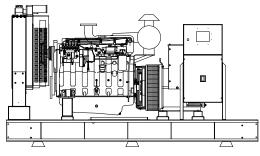


DIMENSIONS & WEIGHT

| WITH CAN | IOPY | | | |
|------------------|-----------------|------------------|----------------|-----------------------|
| Length L (mm) | Width W (mm) | Height H (mm) | Weight (Kg) | Fuel Tank Capacity |
| 3150 | 1000 | 1700 | 1480 | 220 |

OPEN TYPE

| Length | Width | Height | Weight | Fuel Tank |
|--------|--------|--------|--------|-----------|
| L (mm) | W (mm) | H (mm) | (Kg) | Capacity |
| 2550 | 1000 | 1600 | 1230 | 220 |



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ENGINE

| Engine | RICARDO | | |
|---------------------------|-----------|---------------|--|
| Engine Model | | R6105-ZD | |
| Number of Cylinders | | 6 - Inline | |
| Injection System | | Direct | |
| Compression Ratio | | 16 : 1 | |
| Bore | mm | 110 | |
| Stroke | mm | 130 | |
| Displacement | lt | 6.75 | |
| Air Intake | | Turbo | |
| Speed (RPM) | rpm | 1500 | |
| Oil Capacity | lt | 18 | |
| Standby Power | kW / hp | 92.4 / 123.8 | |
| Prime Power | kW / hp | 84 / 112.5 | |
| Fuel Type | | Euro Diesel | |
| Governor System | | Mechanical | |
| Cooling System | | Water Cooling | |
| Coolant Capacity | lt | 23 | |
| | Full Load | 22.2 | |
| Fuel Consumption (It / h) | %75 Load | 16.7 | |
| | %50 Load | 11.1 | |

ALTERNATOR

| Alternator Model | | FLY-274C |
|------------------------------|-----|-------------|
| Frequency | Hz | 50 |
| Power | kVA | 110 |
| Voltage | V | 230 / 400 |
| Nb of Phases | | 3 |
| Aut. Voltage Regulator (AVR) | | AS440 |
| Voltage Regulation | | ±1% |
| Insulation Class | | Н |
| Protection Standard | | IP21 - IP23 |
| Power Factor | Cos | 0.8 |

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FR 110 **Diesel Generator**

TECHNICAL SPECIFICATIONS

ENGINE

- RICARDO 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

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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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