

Power Generator

FD 135 F-F

Code: F.0135.FFC2-Q2670T370-01

Main Features

- Electronic voltage regulation +/-1 %
- Low disturbance level THD <2,5%
- Alternator short circuit capacity 300% I_n 10s
- Class H insulation
- Protection index IP23
- Performance class G3 (acc. ISO 8528-5)
- Ready to load just after start
- AMF and MRS functionality and protection
- Autonomy 15,4 h with 75 % load

General Data

Maximum power ESP	148,0 kVA / 118,0 kW
Nominal power PRP	134,0 kVA / 108,0 kW
Nominal Current PRP	194,0 A
Frequency	50 Hz
Voltage	400 V
Emission standard	Stage II
Fuel	Diesel (EN 590) HVO ref. p. 2
Fuel tank capacity	370 l
Fuel consumption @ 50% / 75% 100% /110% PRP	14,5 / 21,6 / 29,9 / 33,8 l/h
Autonomy @ 75% / 100% load	15,4 / 11,1 h
Weight without fuel	~1300 kg
Dimensions D x S x W	2160 x 1160 x 1570mm

Main Components & Equipment

- Yuchai D138R2-MP-ETA-448 engine
- A4Gen A4G274-140 alternator
- Brushless alternator
- Electronic AVR
- ComAp IL4-AMF25 Controller
- Schneider NSX 250 3P + Mic.2.2 type generator circuit breaker
- GCB shunt release coil
- Linear automatic battery charger
- Engine heater
- Electronic speed governor
- Fuel system Mechanical pump
- Welded frame with 370 l fuel tank
- Two fuel inlets
- Four lifting eyes
- Extended forklift skids for easy attachment to the ground

For details see page 3

Definitions

Nominal Power PRP:

Refers to the maximum power accessible at the variable load for unlimited running hours per year, with the maintenance intervals and procedures being carried out as prescribed by Yuchai. The allowed average output power within 24 h shall not be higher than 70% of the prime power.

Maximum power ESP:

Standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload allowed, average power consumption should not exceed 70% ESP. Limited to 200h of operation per year.

Norms and Directives

- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/EU
- EMC directive 2014/30/EU
- ISO 8528-1/2018, ISO 8528-5/2022
- ISO 8528-13:2016
- IEC 60204-1

Contact data

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Engine

Manufacturer	Yuchai
Type	D138R2-MP-ETA-448
Made in	China
Engine power	116,0 kW
Emission standard	Stage II
Rotation per minute	1500 rpm
Engine governor	Electronic
Governor class	G3 (ISO 8528-5)
Displacement	4,8 l
No of cylinder	4
Fuel system	Mechanical pump
Electrical system	12 V
Cooling system capacity	27,0 l
Oil pan capacity	17,0 l
Fuel type	Diesel (EN 590) HVO (EN 15940)*

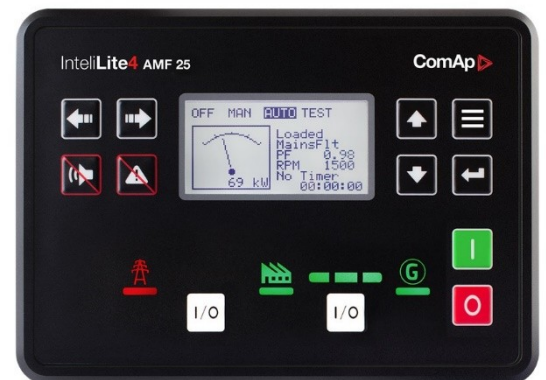
* HVO, has a lower Energy content per unit of volume compared to Diesel EN 590. This leads to the fuel consumption increasing and reducing the power output by 3-5%.

Alternator

Manufacturer	A4Gen
Type	A4G274-140
Made in	China
Nominal Voltage	400 V
Nominal power factor (cos φ)	0,8
Ambient temperature, altitude	40 °C, 1000 m a.s.l.
Nominal Power	140,0 kVA
Protection index	IP 23
No of bearing	Single bearing
Coupling	Direct
Technology	Brushless
Short circuit maintaining capacity	300% 10s
Efficiency	92,7 %
Insulation class	H
Total harmonic content THD	<2,5 %
Reactance Xd''	15,6 %
Voltage regulator type	Electronic AVR
Voltage measurement	1 phase
Voltage accuracy	+/- 1 %
AVR supply system	XAW
AVR supply optional	PMG

Controller

- Controller type: ComAp IntelliLite 4 AMF 25
- Support of Dual AMF/MRS applications
- Direct communication with EFI engines
- Total remote monitoring and control
- Intuitive operator interface, adjustable Main Screen
- Real time clock
- Comprehensive history log with up to 350 events
- 3 phase true RMS current and voltage measurement
- Both mains and generator voltage detection
- Active/Reactive Power and Power Factor per phase measurement
- Run Hours counter with source selector
- 3 maintenance timers (counting even under zero)
- Multipurpose flexible timers (also for rental)
- Battery voltage measurement
- Complete engine and alternator protection
- CAN modules support
- USB port on-board
- 2 slots for plug-in modules
- Plug-in module concept for more capabilities (RS232, RS485, Ethernet, 4G&GPS, Modbus, SNMP, emails, SMS, I/Os)
- Cloud-based monitoring and control via WebSupervisor (optional module required)
- Geofencing and tracking via WebSupervisor (optional module required)
- Control and monitoring over SMS (GSM module required)
- 3 levels of password protection
- In-built PLC, complemented with a monitoring/debugging tool, for additional functionality, if required
- Spare inputs and outputs available by default: binary input – 2, binary output – 1, analogue input – 3,
- A version for low temperature is also available





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Standard equipment

- Yuchai D138R2-MP-ETA-448 engine
- Electronic engine speed governor
- Oil pressure sensor
- Engine high temperature sensor
- Engine preheating with thermostat
- Engine oil Titan Cargo 15W40
- Fuel filter with water separator
- Coolant Fuchs Maintain Fricofin LL-50
- Starting batteries 100 Ah
- Linear automatic battery charger
- A4Gen A4G274-140 alternator
- Electronic AVR
- GCB Schneider NSX 250 3P + Mic.2.2
- GCB shunt release coil
- ComAp IL4-AMF25 controller
- Acoustic alarm
- Emergency stop button
- Fuel tank integrated with a frame
- Welded fuel tank in spill containment
- Two fuel inlets
- Fuel level indicator
- Engine and alternator anti vibration mounts
- Exhaust silencer with compensator
- Fork lift supports and lifting eyes

Optional equipment

- Oil draining hand pump
- Battery disconnecter
- 4P Schneider NSX Micrologic 2.2 GCB
- Transfer switch controlled by generator controller
- Transfer switch with ATS controller
- ATS accessories for outdoor application
- GPRS communication card
- Ethernet card
- RS 485, RS 232 card
- Remote display
- Generator spill containment level detector
- External, double wall fuel tank 1 000 – 10 000 l
- Fuel tank filling pump and shut-off valve

Maintenance guidelines

Fuel filters replacement	500 h / 1 year
Oil replacement	After first 100h / year, then every 500 h / 1 year
Oil filters replacement	After first 100h / 1 year, then every 500 h / 1 year
Coolant replacement	3000h / 2 years
Air filter replacement	1000 h
Battery replacement	2 years
Electrical installation	According to local requirements, at least once per year

Installation guidelines

Power terminal	GCB terminal
Recommended cable for up to 30m power cable way	Flexible 5x70 mm ²
Recommended cable for do 30m generator heater supply	Flexible 3x2,5 mm ²
Exhaust pipe min diameter (max. 7 m, 4 bends)	76,1 mm
Exhaust pipe min diameter (max. 15 m, 4 bends)	88,9 mm

*For additional cable connection with FOGO ATS see ATS wiring diagram

Warranty

Continuous operation generators	12 months up to 1000 working hours
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