



Picture for reference only

Power Generator

FD 20 B-Q

Code: F.0020.4.BZ-Q2170T190-02

Main Features

- Electronic voltage regulation $\pm 1\%$
- One phase voltage control
- Low disturbance level THD $< 3,5\%$
- Alternator short circuit capacity 250% 10s I_n (optional 300 %)
- 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 45,0 h with 75 % load
- Compact design
- Forklift manouvable from the front and side wall

General Data

Maximum power ESP	22,0 kVA / 18,0 kW
Nominal power PRP	20,0 kVA / 16,0 kW
Nominal Current PRP	29,0 A
Frequency	50 Hz
Voltage	400 V
Emission standard	non-emission
Fuel	Diesel (EN 590)
Fuel tank capacity	190 l
Fuel consumption @ 50% / 75% / 100% / 110% PRP	2,8 / 3,8 / 5,2 / 6 l/h
Autonomy @ 75% / 100% load	45,0 / 32,8 h
Weight without fuel	~680 kg
Dimensions L x W x H	2170 x 1020 x 1300 mm
Guaranteed noise power L_{wa}	90 dBA
Acoustic pressure @7mL_{pa}	~60 dBA

Main Components & Equipment

- Baudouin 4M06G4D0/S engine
- Linz SLT18MD alternator
- Brushless alternator
- Electronic AVR
- ComAp IL-AMF25 Controller
- Schneider Z32/4 type generator circuit breaker
- GCB shunt release coil
- Linear automatic battery charger
- Engine heater
- Electronic speed governor
- Fuel system direct injection
- Welded frame with 190 l fuel tank, spill containment and noise insulation
- Two fuel inlets
- Four lifting eyes
- Extended forklift skids for easy attachment to the ground

For details see page 3

Definitions

Nominal Power PRP:

Prime power available in variable load application in accordance with ISO 8528, 10% overload capacity is available for a period of 1 hour within a 12-hour period of operation. Average power consumption should not exceed 70% PRP for each 24h of operation.

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 500h of operation per year including 24 hours with ESP

Norms and Directives

- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/EU
- EMC directive 2014/30/EU
- Noise directive 2000/14/EC
- ISO 8528-1/2018, ISO 8528-5/2022
- ISO 8528-13:2016
- IEC 60204-1

Contact data

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Engine

Manufacturer	Baudouin
Type	4M06G4D0/S
Made in	China
Engine power	22,0 kW
Emission standard	non-emission
Rotation per minute	1500 rpm
Engine governor	electronic
Governor class	G3 (ISO 8528-5)
Displacement	2,3 l
No of cylinder	4
Fuel system	direct injection
Electrical system	12 V
Cooling system capacity	8,6 l
Oil pan capacity	9,5 l
Fuel type	Diesel (EN 590)

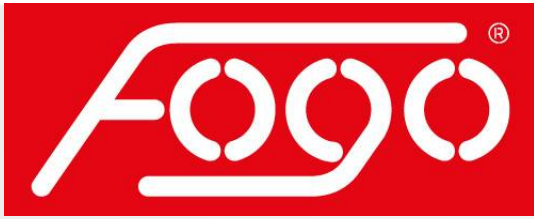
Alternator

Manufacturer	Linz
Type	SLT18MD
Made in	Italy
Nominal Voltage	400 V
Nominal power factor (cos φ)	0,8
Ambient temperature, altitude	40 °C, 1000 m a.s.l.
Nominal Power	20,0 kVA
Protection index	IP 23
No of bearing	Single bearing
Coupling	Direct
Technology	Brushless
Short circuit maintaining capacity	250% 10s
Efficiency	86,1 %
Insulation class	H
Total harmonic content THD	<3,5 %
Reactance Xd"	9 %
Voltage regulator type	AVR HVR-11
Voltage measurement	1 phase
Voltage accuracy	+/- 1 %
AVR supply system	Auxiliary winding

Controller

- Controller type: ComAp IntelliLite 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, GPRS, 4G/LTE, 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 – 1, binary output – 1, analogue input – 1,
- A version for low temperature is also available





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Standard equipment

- Baudouin 4M06G4D0/S engine
- Electronic engine speed governor
- Oil low pressure switch
- Oil pressure sensor
- Engine high temperature switch
- Engine high temperature sensor
- Engine preheating with thermostat
- Engine oil Titan Cargo 15W40
- Fuel filter with water separator
- Coolant Fuchs Maintain Fricofin DP
- Coolant inlet outside, on the top of the canopy
- Starting batteries 75 Ah
- Linear automatic battery charger
- Linz SLT18MD alternator
- Electronic AVR HVR-11
- GCB Schneider Z32/4
- GCB shunt release coil
- ComAp IL3-AMF25 controller
- Acoustic alarm
- Emergency stop button
- Silenced canopy, RAL 7024
- Fuel tank integrated with a frame and spill containment
- Two fuel inlets inside the canopy
- Fuel level indicator
- Engine and alternator anti vibration mounts
- Exhaust silencer with compensator
- Forklift supports and lifting eyes

Optional equipment

- Oil draining hand pump
- Battery disconnecter
- Power Lock type power output
- Power sockets box SOM 206
- 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
- Fuel inlet outside of the canopy with lock
- 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, then every 500 h / 1 year
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Coolant replacement	4000 h / 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 5x6 mm ²
Recommended cable for do 30m generator heater supply	Flexible 3x2,5 mm ²
Exhaust pipe min diameter (max. 7 m, 4 bends)	48,3 mm
Exhaust pipe min diameter (max. 15 m, 4 bends)	48,3 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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