

Picture for reference only

Power Generator

FD 60 I-C

Article: 36592

Code: F.0060.IA-C2220T260-02

Main Features

- Digital voltage regulation +/-0,25 %
- Three phase voltage control
- Low disturbance level THD <2%
- Alternator short circuit capacity 270 % I_n (optional 300 %)
- Class H insulation
- Protection index IP23
- Performance class G2 (acc. ISO 8528-5)
- Ready to load just after start
- AMF and MRS functionality and protection
- Autonomy 22,7 h with 75 % load
- Compact designKompaktowe rozmiary
- Forklift manouvable from the front and side wall

General Data

Maximum power ESP	66,0 kVA / 53,0 kW
Nominal power PRP	60,0 kVA / 48,0 kW
Nominal Current PRP	86,0 A
Frequency	50 Hz
Voltage	400 V
Emission standard	stage II
Fuel	Diesel (EN 590)
Fuel tank capacity	260 l
Fuel consumption @ 50% / 75% 100% /110% PRP	7,2 / 10,3 / 13,7 / 15 l/h
Autonomy @ 75% / 100% load	22,7 / 17,0 h
Weight without fuel	~1200 kg
Dimensions L x W x H	2220 x 1150 x 1700 mm
Guaranteed noise power L_{wa}	96 dBA
Acoustic pressure @7mL_{pa}	67 ± 1 dBA

Main Components & Equipment

- FPT (Iveco) NEF45SM1A engine
- Leroy Sommer TAL 042 H alternator
- Brushless alternator
- Digital AVR
- ComAp IL-AMF25 Controller
- Schneider NSX 160 3P + Mic.2.2 type generator circuit breaker
- GCB shunt release coil
- Linear automatic battery charger
- Engine heater
- Mechanical speed governor
- Fuel system direct injection
- Welded frame with 260 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, A 10% overload capacity is available for a period of 1 hour within a 12h period of operation. Average power consumption should not exceed 80% PRP for each 24h of operation. operation

Maximum power ESP:

Emergency standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload allowed, limited to 200h of operation per year, max average power consumption 70% of 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

FOGO Sp. z o.o.

Święciechowska 36, 64-115 Wilkowice
agregaty@fogo.pl, www.fogo.pl



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Engine

Manufacturer	FPT (Iveco)
Type	NEF45SM1A
Made in	Italy
Engine power	53,3 kW
Emission standard	stage II
Rotation per minute	1500 rpm
Engine governor	mechanical
Governor class	G2 (ISO 8528-5)
Displacement	4,5 l
No of cylinder	4
Fuel system	direct injection
Electrical system	12 V
Cooling system capacity	18,5 l
Oil pan capacity	12,8 l
Fuel type	Diesel (EN 590)

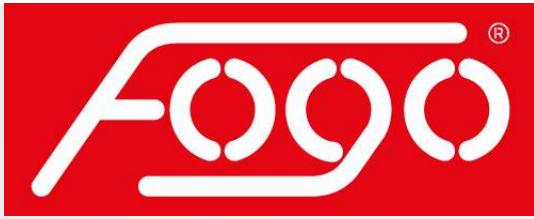
Alternator

Manufacturer	Leroy Sommer
Type	TAL 042 H
Made in	Czech Republic
Nominal Voltage	400 V
Nominal power factor (cos φ)	0,8
Ambient temperature, altitude	40 °C, 1000 m a.s.l.
Nominal Power	60,0 kVA
Protection index	IP 23
No of bearing	Single bearing
Coupling	Direct
Technology	Brushless
Short circuit maintaining capacity	270% 10s
Efficiency	89,9 %
Insulation class	H
Total harmonic content THD	<2 %
Reactance Xd''	7,3 %
Voltage regulator type	AVR, digital
Voltage measurement	3 phase
Voltage accuracy	+/- 0,25 %
AVR supply system	AREP+
AVR supply optional	PMG

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 – 2, binary output – 1, analogue input – 3,
- A version for low temperature is also available





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Standard equipment

- FPT (Iveco) NEF45SM1A engine
- Oil low pressure switch
- Engine high temperature switch
- Engine preheating with thermostat
- Engine oil Titan Cargo 15W40
- Fuel filter with water separator
- Coolant Fuchs Maintain Fricofin LL-50
- Coolant inlet outside, on the top of the canopy
- Starting batteries 100 Ah
- Linear automatic battery charger
- Leroy Sommer TAL 042 H alternator
- Digital AVR
- GCB Schneider NSX 160 3P + Mic.2.2
- GCB shunt release coil Busbar power output
- ComAp IL-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
- Fork lift supports and lifting eyes

Optional equipment

- Electronic engine speed governor
- Oil draining hand pump
- Oil pressure sensor
- Engine high temperature sensor
- Battery disconnecter
- 4P Schneider NSX Micrologic 2.2 GCB
- Power Lock type power output
- Power sockets box SOM 204
- 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	1000 h / 2 years
Air filter replacement	500 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 5x25 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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