



# Power Generator FD 820 S-T

Code: F.0820.SAG24-T9000T1998-02

## Main Features

- Digital voltage regulation +/-0,25 %
- Three phase voltage control
- Low disturbance level THD <1,5%
- Alternator short circuit capacity 270 % I<sub>n</sub> (optional 300 %)
- Class H insulation
- Protection index IP23
- Common power output busbar
- Performance class G3 (acc. ISO 8528-5)
- Ready to load just after start
- Synchronization with other units
- Synchronization with mains available as additional option
- Autonomy 14,9 h with 75 % load
- Even wear-off due to automatic operation priority swap

## General Data

<b>Maximum power ESP</b>	900,0 kVA / 720,0 kW
<b>Nominal power PRP</b>	820,0 kVA / 656,0 kW
<b>Nominal Current PRP</b>	1184,0 A
<b>Frequency</b>	50 Hz
<b>Voltage</b>	400 V
<b>Emission standard</b>	fuel optimized
<b>Fuel</b>	Diesel (EN 590)
<b>Fuel tank capacity</b>	2x990 l
<b>Fuel consumption @ 50% / 75% 100% /110% PRP</b>	82,2 / 119,8 / 157,6 / 175,6 l/h
<b>Autonomy @ 75% / 100% load</b>	14,9 / 11,3 h
<b>Weight without fuel</b>	9350 kg
<b>Dimensions L x W x H</b>	9000 x 1900 x 2600 mm
<b>Guaranteed noise power L<sub>wa</sub></b>	103 dBA
<b>Acoustic pressure @7mL<sub>pa</sub></b>	72,6 ± 1 dBA

## Main Components & Equipment

- Scania DC13 072A 02-12 engine
- Leroy Sommer TAL 0473 A alternator
- Brushless alternator
- Digital AVR
- ComAp IG4 200 Controller
- 2 x Schneider NS800 3P + Micrologic 2.0 type generator circuit breaker
- GCB undervoltage release coil
- Linear automatic battery charger
- Engine heater
- Electronic speed governor
- Fuel system unit injectors, PDE
- Welded frame with 2x990 l fuel tank, spill containment and noise insulation
- Two fuel inlets
- Four lifting eyes
- Extended supports 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 24-hour period of 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 mean load factor of 70% of rated power over 24-hour period of operation.

## 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



# Power Generator FD 820 S-T

Code: F.0820.SAG24-T9000T1998-02

## Engine

<b>Manufacturer</b>	Scania
<b>Type</b>	DC13 072A 02-12
<b>Made in</b>	Sweden
<b>Engine power</b>	355,0 kW
<b>Emission standard</b>	fuel optimized
<b>Rotation per minute</b>	1500 rpm
<b>Engine governor</b>	electronic
<b>Governor class</b>	G3 (ISO 8528-5)
<b>Displacement</b>	12,7 l
<b>No of cylinder</b>	6
<b>Fuel system</b>	unit injectors, PDE
<b>Electrical system</b>	24 V
<b>Cooling system capacity</b>	38,0 l
<b>Oil pan capacity</b>	36,0 l
<b>Fuel type</b>	Diesel (EN 590)

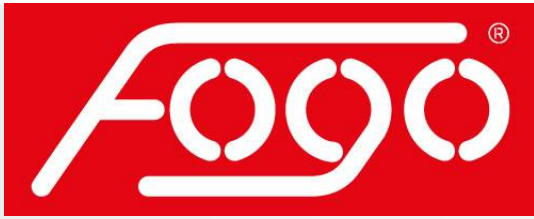
## Alternator

<b>Manufacturer</b>	Leroy Sommer
<b>Type</b>	TAL 0473 A
<b>Made in</b>	Czech Republic
<b>Nominal Voltage</b>	400 V
<b>Nominal power factor (cos φ)</b>	0,8
<b>Ambient temperature, altitude</b>	40 °C, 1000 m a.s.l.
<b>Nominal Power</b>	410,0 kVA
<b>Protection index</b>	IP 23
<b>No of bearing</b>	Single bearing
<b>Coupling</b>	Direct
<b>Technology</b>	Brushless
<b>Short circuit maintaining capacity</b>	270% 10s
<b>Efficiency</b>	93,2 %
<b>Insulation class</b>	H
<b>Total harmonic content THD</b>	<1,5 %
<b>Reactance Xd''</b>	17,2 %
<b>Voltage regulator type</b>	AVR, digital
<b>Voltage measurement</b>	3 phase
<b>Voltage accuracy</b>	+/- 0,25 %
<b>AVR supply system</b>	AREP+
<b>AVR supply optional</b>	PMG

## Controller

- Controller type: ComAp IntelliGen4 200,
- Intuitive operator interface,
- Parallel operation for up to 32 gen-sets,
- Support of MINT and SPTM applications,
- Running Hours equalization,
- Load sharing and VAr sharing via CAN,
- Power management, load demand start / stop,
- Comprehensive history log with up to 350 events,
- Total remote monitoring and control,
- Real time clock,
- Detailed event based history with up to 350 records,
- Rental timers,
- PLC support with PLC editor and monitor,
- True RMS measurement,
- Generator protection (over/under frequency, voltage, overcurrent),
- Battery voltage measurement,
- Complete engine and alternator protection,
- Multipurpose flexible timers with full calendar,
- Communication with ECU, supporting CAN J1939 standard,
- Up to 5 languages in the controller,
- Active SMS and emails in different languages,
- Integrated communication and control ports (USB/CAN/RS485 on board, USB host),
- Support of MODBUS RTU/TCP or SNMP v1/v2c \*
- 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),
- 3 levels of password protection,
- PLC module for extended, customized functionality,
- Spare signals available: 4 binary inputs, 2 binary outputs, 3 analogue inputs





# Power Generator FD 820 S-T

Code: F.0820.SAG24-T9000T1998-02

## Standard equipment

- Scania DC13 072A 02-12 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 LL-50
- Coolant inlet outside, on the top of the canopy
- Starting batteries 4x180Ah
- Linear automatic battery charger
- Leroy Sommer TAL 0473 A alternator
- Digital AVR
- GCB 2 x Schneider NS800 3P + Micrologic 2.0
- GCB undervoltage release coil
- Busbar power output
- ComAp IG4 200 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
- Lifting eyes

## Optional equipment

- Oil draining hand pump
- Battery disconnecter
- 4P Schneider NS Micrologic 2.0 GCB
- 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

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

## Installation guidelines

<b>Power terminal</b>	Common busbar
<b>Recommended cable for up to 30m power cable way</b>	Flexible 3x5x240 mm <sup>2</sup>
<b>Recommended cable for do 30m generator heater supply</b>	Flexible 5x2,5 mm <sup>2</sup>
<b>Exhaust pipe min diameter (max. 7 m, 4 bends)</b>	133 mm
<b>Exhaust pipe min diameter (max. 15 m, 4 bends)</b>	

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

## Warranty

<b>Continuous operation generators</b>	12 months up to 1000 working hours
--	------------------------------------