MAIN FEATURES

Highest quality and reliability.	Wide range of standard and optional equipment.
ComAp IL-NT AMF25 controller.	Wide range of remote communications options.
Ready to control MAINS – GENERATOR transfer switch.	Configured for both manual and automatic mode (MRS + AMF).
Anticorrosion coating: frame - Zr, canopy – Zr, Al-Zn.	Drip tray,
Brushless alternator.	Digital, 3 phase voltage regulator – DVR.
Engine heater – ready to load just after start.	

GENERAL DATA

Model	FDG 20 MS
Standby power E.S.P. [kVA] / [kW]	22,0 / 17,6
Prime power P.R.P. [kVA] / [kW]	20,0 / 16,0
Prime current P.R.P [A]	28,9
Frequency [Hz]	50
Voltage [V]	400
Exhaust emission	non-emission
Fuel type	Diesel (EN 590)
Fuel consumption - 50% load [l/h]	3,5
- 75% load [l/h]	4,7
- 100% load [l/h]	6,3
- 110% load [l/h]	7,1
Standard fuel tank capacity [l]	140
Autonomy with 100% load [h]	22,2
Engine control voltage [V]	12
Weight without fuel [kg]	710
Dimensions L x W x H [mm]	1954 x 1006 x 1435
Guaranteed noise power Lwa [dBA]	93
Acoustic pressure Lpa (@7m) [dBA]	62,4 ± 1,8

Nominal power P.R.P:
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% P.R.P for each 24h of work.

Stand-by power E.S.P.:
Emergency standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload allowed, limited to 200 operation hours per year, average power consumption should not exceed 70% E.S.P for each 24h

Remark:
All parameters are given for reference conditions: ambient air temperature up to 40 C and site altitude above sea level 1000m

Norms and directives:
- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/EC
- EMC directive 2014/30/EC
- Noise directive 2000/14/EC
- Emission directive 97/68/EC
- ISO 8528-1/2005, ISO 8528-5/2013
- EN ISO 8528-13:2016
- EN 60204-1

STANDARD CONTROLLER

Controller type: AMF 25
Easy to operate, intuitive graphical interface
Real time clock with battery supply
AMF function available
Flexible event based history with up to 119 events
3 Phase generator current measurement
Generator and Mains phase voltage measurement
Active/reactive power measurement
Active and reactive energy counter
Running hours counter
Battery charging alternator circuit connection
Fuel level measurement
Generator protection (over/under frequency, voltage, overcurrent)
Communication with ECU supporting CAN J1939 standard
Communication interface RS 485 and RS 232 supporting Modbus RTU (IL-NT RS232-485 module required)
GSM modem / wireless internet (IL-NT GPRS module required)
Internet/Ethernet communication (IB-Lite module required)
InteliMonitor software for single gen-set view
WebSupervisor software for Android mobile devices or PC's for fleet management
Active SMS or e-mail (IL-NT GPRS or IB-Lite module required)

ENGINE

Brand	Mitsubishi
Type	S4Q2-61SDB
Made in	Japan
Engine power [kW]	19,6
Emission standard*	non-emission
Rotation per minute [rpm]	1500
Engine governor	mechanical
Governor class**	G2
Displacement [l]	2,5
No of cylinder	4
Fuel system	
Electrical system [V]	12
Cooling system capacity [l]	4,0
Oil pan capacity [l]	6,5
Fuel type	Diesel (EN 590)

ALTERNATOR

Brand	Sincro*
Type	SK160MB
Made in	Italy
Power (40 °C, 1000m a.m.s.l.) [kVA]	20,0
Power (27 °C, 1000m a.m.s.l) [kVA]	22,0
Efficiency [%]	86,0
Voltage regulator type	DVR, digital
Voltage accuracy [%]	+/- 0,5
IP protection	IP 23
Insulation class	H
Total harmonic content THD [%]	<3,0
Reactance Xd'' [%]	12,5

*   According directive 97/68/EC non road mobile machinery engine emission.
**   According ISO 8528-5/2005

*   STAMFORD or other alternator suppliers on request. Genset general data may change in this case.

STANDARD EQUIPMENT

Mitsubishi S4Q2-61SDB engine	✓
Glow plugs	✓
Oil low pressure switch	✓
Engine high temperature switch	✓
Engine preheating with thermostat	✓
Engine oil Shell Rimula R4L	✓
Coolant Anti Freeze	✓
Coolant inlet outside of the canopy	✓
Coolant draining valve	✓
Starting batteries 75 Ah	✓
Battery charger	✓
Sincro SK160MB alternator	✓
Digital 3 phase AVR	✓
GCB Schneider-Z32/3	✓
GCB shunt release coil	✓
Controller IL-NT-AMF25	✓
Controller switch	✓
Acoustic alarm	✓
Emergency stop button	✓
Silenced canopy made with Al.-Zn.	✓
Standard color RAL 7032	✓
Fuel tank integrated with a frame with drip tray	✓
Welded frame with fuel tank	✓
Fuel inlet outside of the canopy with lock	✓
Fuel level measurement	✓
Exhaust compensator and silencer	✓
Engine and alternator vibro isolators	✓
Transportation brackets	✓

OPTIONAL EQUIPMENT

Oil pressure sensor	✓
Engine temperature sensor	✓
Oil draining hand pump	✓
Fuel filter with water separator	✓
Battery disconnection switch	✓
4 pole GCB miniature circuit breaker	✓
Full power socket	✓
Power socket box*	✓
Transfer switch controlled by generator controller	✓
Transfer switch with ATS controller	✓
GPRS communication card	✓
Ethernet card	✓
RS 485, RS 232 card	✓
Remote display	✓
Welded drip tray	✓
Drip space level sensor	✓
Fuel and retention pump	✓
Non-standard fuel tank size*	✓
External fuel tank 1 000 – 10 000 l	✓
Fuel tank filling pump and shut-off valve	✓
Non-standard canopy color	✓
Trailer with straight drawbar	✓

*according to individual agreement

INSTALLATION GUIDELINES

Power terminal	GCB terminal
Recommended cable for up to 30m power cable way	Flexible 5x10mm2
Recommended cable for do 30m generator heater supply	Flexible 3x2,5mm2
Exhaust pipe min diameter (max. 7 m, 4 bends)	48,3 mm
Exhaust pipe min diameter (max. 15 m, 4 bends)	60,3 mm

MAINTENANCE GUIDELINES

Fuel filters replacement	250 h / 1 year
Oil replacement	After first 50h, then every 250 h / 1 year
Oil filters replacement	After first 50h, then every 250 h / 1 year
Coolant replacement	1000 h / 2 years
Battery replacement	2 years
Electrical installation supervising	According to local requirements, at least once per year

WARRANTY

Continuous work generators	12 months up to 1000 working hours