

GENERATING SET GE 140 FSX

The images are for reference



FEATURES

- Bundled base suitable to contain any liquids leakage from engine avoiding environmental pollution
- Oil drain pump
- Fuel pre-filter with water separator
- Large doors for better and easy maintenance (air, oil, fuel filters replacement)
- Single point lifting eye and forklift pockets
- Control panel with digital control unit available with automatic or manual version
- Suitable for a wide range of uses in general construction
- Supersilenced
- Complies with regulation 2016/1628/EU FOR STATIONARY USE ONLY



POWER RATINGS	
* Stand-By three-phase power (LTP)	140 kVA (112 kW) / 400V / 202.1A
* PRP three-phase power	125 kVA (100 kW) / 400V / 180.4A
* PRP single-phase power	99 kVA (79.2 kW) / 400V / 176.3 A
Frequency	50 Hz
Cos φ	0.8

* Output powers according to ISO 8528-1

DEFINITION

Valid declared powers up to the followings environmental conditions: temperature 25°C, altitude 100 meters above sea level

LTP power: stand-by power: Maximum available power for use with variable loads for a yearly number of hours limited at 500 h. No overload is admitted.

PRP power: continue power with variable loads. Maximum power for use with variable loads for a yearly illimited nubers of hours.

COP power: continuous power with constant load. Maximum power for use with constant loads for a yearly unlimited numbers of hours.

ENGINE 1500 RPM

4 STROKE, DIRECT INJECTION, TURBOCHARGED	
Model	FPT (IVECO) N45TM3
* Stand-By net power	118.2 kW (160 hp)
* PRP net power	107.2 kW (146 hp)
* COP net power	85.7 kW (117 hp)
Cylinders / Displacement	4 / 4500 cm ³ (4.5 lt.)
Bore / Stroke	104 / 132 (mm)
Compression ratio	17.5 : 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	2130 kPa - 1937 kPa
Speed governor type	Mechanical
FUEL CONSUMPTION	
110 % (Stand-by power)	30.4 lt./h - 211.5 g/kWh
100 % to PRP	27.6 lt./h - 211 g/kWh
75 % to PRP	20 lt./h - 206 g/kWh
50 % to PRP	14.4 lt./h - 220 g/kWh
COOLING SYSTEM	
Total system cap. - only engine	10 lt - 8.5 lt.
Fan air flow	132 m ³ /min.
LUBRIFICATION SYSTEM	
Total oil system capacity	12,8 l
Oil capacity in sump	8.5 lt. ÷ 5.5 lt.
Oil consumption at full load	< 0.023 l/h

* Output powers according to ISO 3046-1

EXHAUST SYSTEM	
Maximum exhaust gas flow	9 kg/mim.
Max. exhaust gas temp.	540 °C
Maximum back pressure	5 kPa (0.05 bar)
External diameter exhaust pipe	/
ELECTRICAL SYSTEM	
Starter motor power	3 kW
Battery charging alternator cap.	90 A
Cold start	- 10 °C
With cold start aid	- 25°C
AIR FILTER	
Combustion air flow	7.1 m ³ /min
HEAT REJECTED AT FULL LOAD	
To exhaust system	590 kcal/kWh
To water and oil	334 kcal/kWh
Radiated to room	215 kcal/kWh
To charge cooler	118 kcal/kWh



ALTERNATOR

SYNCHRONOUS, THREE-PHASE, SELF-EXCITED, SELF-REGULATED, BRUSHLESS

Continuous power	132 kVA
Stand-by power	145 kVA
Three phase voltage	380 - 415 Vac
Frequency	50 Hz
Cos φ	0.8
Model A.V.R.	MARK V
Voltage regulation acc.	± 0.5 %
Sustained short circuit current	3 In
Transient dip (100% load)	< 20 %
Recovery time	< 0.3 sec
Efficiency at 100% load	92.2 % (400V - Cos φ 0.8)
Insulation	Class H
Connection - Terminals	Star - N°12
Electromagnetic compatibility (R.F.I. suppr.)	EN 55011
Waveform distortion - THD	< 2 %
Telephone interference - THF	< 2 %

REACTANCES (132 kVA - 400V)

Direct axis synchronuos - Xd	265 %
Direct axis transient - X'd	19.3 %
Subdirect axis transient - X''d	9.5 %
Quadrature axis synchronuos - Xq	145 %
Quadr. axis subtransient - X''q	10.6 %
Negative sequence - X2	10.1 %
Zero sequence - X0	2.2 %
TIME CONSTANTS	
Transient - T'd	0.087 sec
Subtransient - T''d	0.006 sec
Open circuit - T'do	1.08 sec
Armature - Ta	0.007 sec
Short-circuit ratio Kcc	0.42
Grado di Protezione IP	IP 23
Cooling air flow	0.31 m ³ /sec.
Coupling Bearing	Direct SAE 3 - 11 ½ - N°1

GENERAL SPECIFICATIONS

Fuel tank capacity	230 lt.
Running time (75% to PRP)	11.5 h
Starter battery	12 Vdc -100Ah
IP protection degree	IP 44

* Measured acoustic power LwA (pressure LpA)	94 dB(A) (69 dB(A) @ 7m)
* Guaranteed acoustic power LwA (pressure LpA)	95 dB(A) (70 dB(A) @ 7m)
Performance class (ISO 8528)	G2

* Acoustic power according to European Directive 2000/14/CE

CONTROL PANEL

- Controller AMF 25
- Controller supply switch
- Siren
- Emergency stop button
- TCM 35 remote control plug
- Four pole circuit breaker
- PAC (ATS) plug - Automatic control panel only
- Battery charger - Automatic control panel only
- Earth terminal (PE)



AMF25 CONTROLLER CHARACTERISTICS	
Operating mode	<ul style="list-style-type: none"> • OFF - MAN. - AUTO - TEST
Display	<ul style="list-style-type: none"> • Graphic back-light LCD display 128x64 pixels
LEDs	<ul style="list-style-type: none"> • Gen-set voltage OK • Gen-set failure • GCB ON (only for Automatic transfer unit) • Mains voltage OK (only for Automatic transfer unit) • Mains failure (only for Automatic transfer unit) • MCB ON (only for Automatic transfer unit)
Buttons	<ul style="list-style-type: none"> • START button • STOP button • FAULT RESET button • RESET HORN button • MODE selection button • Pulsante chiusura/apertura GCB button • Pulsante chiusura/apertura MCB button • N° 4 buttons for controller programming
Generator Measures	<ul style="list-style-type: none"> • Voltage : L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 • Current : I1 - I2 - I3 • Powers : kVA - kW - kVAR (totali e per fase) • Energy : kVAh - kWh - kVARh • Cos φ (medium and per phase) • Frequency
Engine Measures	<ul style="list-style-type: none"> • Water temperature • Oil pressure • Fuel level • Rpm meter • Battery voltage • Maintenance • Hours meter • Starts number
Generator Protections	<ul style="list-style-type: none"> • Overload • Overcurrent • Short circuit • Over-Undervoltage • Over-Underfrequency • Voltage asymmetry • Unbalanced current • Phase sequence
Engine Protections	<ul style="list-style-type: none"> • Overspeed • High water temperature warning • Low oil pressure warning • Low fuel level warning • Over-Under battery voltage • Battery charge alternator failure • Start failure • Stop failure • Emergency stop • Low water level shutdown (option)

AMF functions (Automatic control panel only)	<ul style="list-style-type: none"> • Measure mains voltage : L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 • Measure mains frequency • Three phase detection • Over-Under mains voltage • Over-Under mains frequency • Voltage asymmetry • Phase sequence • Dual mutual stand-by application
Features	<ul style="list-style-type: none"> • Event log and alarms • 2 tests run scheduler (Automatic test or scheduled starts) • Engine idle management (Idle) • Remote Start and Stop • Pre-heating • 2 selectable languages (other languages available) • Setpoints adjustable via controller buttons or PC • Direct connection to engines with ECU via Can bus J1939 • Configurable inputs and outputs (only via PC) • IP65 protection • Operation temperature: -20°C / +70°C
Communication	<ul style="list-style-type: none"> • RTU Modbus (optional board with RS232 & RS485 outputs is needed) • TCP/IP Modbus (optional Ethernet board with RJ45 output is needed) • SNMP Modbus (optional Ethernet board with RJ45 output is needed) • Internet (optional Ethernet board optional is needed) • GSM/GPRS (integrated Modem board optional is needed) for Gen-set remote control via SMS or internet

CONTROL PANEL VERSION WITH OUTPUT SOCKETS	
SOCKETS	1x 400V 125A 3P+N+T CEE
Each socket is protect by own automatic switch.	1x 400V 63A 3P+N+T CEE
Circuit breaker for 125A and 63A sockets.	1x 400V 32A 3P+N+T CEE
GFI and circuit breaker 30mA for 32A and 16A socket.	1x 400V 16A 3P+N+T CEE
	1x 230V 16A 2P+T CEE
	1x 230V 16A 2P+T SCHUKO



WEIGHT - DIMENSIONS AND ACCESSORIES

GE 140 FSX



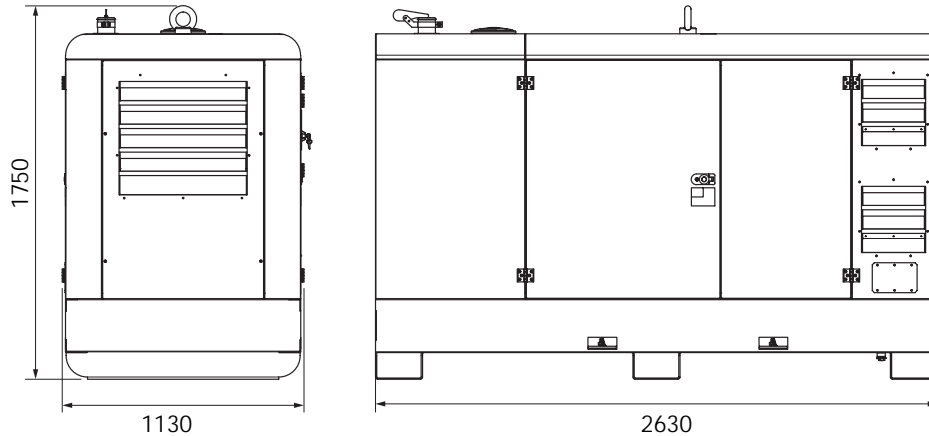
DRY WEIGHT MACHINE:

- 1700 kg

Generating set pictured may include optional accessories.



DIMENSIONS DRAW



OPTIONS ON REQUEST

- Automatic transfer switch unit (ATS) PAC 170-M (250A)
- Remote control TCM35
- Earthing kit
- Container feet kit



VERSIONS ON REQUEST

- Version with manual control panel 6 output sockets EC and SCHUKO (see Control board with output sockets section)
- Manual digital control panel (without sockets)



FACTORY INSTALLATION OPTIONS

- Engine water heater WH
- Spark arrestor
- Tank 350l
- 3-way valve fuel system with quick connection for external fuel tank supply
- Main battery switch
- Low level water sensor
- PMG - permanent magnet alternator excitation
- Electronic leakage relay
- Isometer
- Volt adjustable from control panel
- Plug-in board with RS232 & RS485 output for RTU Modbus protocol
- Ethernet plug-in board with RJ45 output for TCP/IP Modbus protocol - SNMP Modbus - Internet
- Plug-in board with integrated GSM/GPRS Modem for Gen-set remote control via SMS or Internet

GENERAL INFORMATION

COMPLIANCE GENERATING SETS WITH EC DIRECTIVES AND STANDARDS

2006/42 / EC (Machinery Directive)

2014/35 / UE (Low Voltage Directive)

2014/30 / UE (Electromagnetic Compatibility Directive)

ISO 8528 (Reciprocating internal combustion engine driven alternating current generating sets)



ISO 9001:2015 - Cert. 0192

WARRANTY

All devices are covered by the manufacturer's warranty.

Non-contractual document. Specification subject to change without notice.

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