

GENERATING SET GE 50 PSSX

The images are for reference



FEATURES

- Automatic voltage regulation "AVR" with three-phase sensing
- Round edges for a better rain flow
- Bunded base suitable to contain any liquids leakage from engine avoiding environmental pollution
- External caps for oil and water drain
- Large doors for better and easy maintenance (air, oil, fuel filters replacement)
- Central lifting eye
- Forklift pockets
- Control panels with digital control units: Manual / Manual with sockets / Automatic
- Meets EC directives for noise and safety



water
cooled



diesel



three-phase
power



electric



super
silenced

POWER RATINGS

* Stand-By three-phase power (LTP)	51 kVA (40.8 kW) / 400V / 73.6 A
* PRP three-phase power	46 kVA (36.8 kW) / 400V / 66.4 A
* PRP single-phase power	17 kVA / 230V / 73.9 A
* COP power	/
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-TEMPI, TURBOCHARGED

Model	PERKINS 1103A-33TG1
Cylinders / Displacement	3 / 3300 cm ³ (3.3 lt.)
Bore / Stroke	105 / 127 (mm)
Compression ratio	17.25 : 1
* Stand-By net power	45.6 kWm (62 hp)
* PRP net power	41.3 kWm (56.2 hp)
* COP net power	/
BMEP (Brake Mean Effective Pressure : LTP - PRP)	1128 kPa - 1023 kPa
Speed governor type	Mechanical
FUEL CONSUMPTION	
110 % (Stand-by power)	219 g/kWh - 12 lt./h
100 % to PRP	217 g/kWh - 10.7 lt./h
75 % to PRP	220 g/kWh - 8.2 lt./h
50 % to PRP	264 g/kWh - 5.7 lt./h
COOLING SYSTEM	
Total system cap. - only engine	10,2 lt - 4,4 lt.
Fan air flow	53 m ³ /min.
LUBRICATION SYSTEM	
Total oil system capacity	8.3 lt
Oil capacity in sump	6.2 lt, ÷ 7.8 lt
Oil consumption at full load	< 0.016 lt./h

* Output powers according to ISO 3046-1

EXHAUST SYSTEM	
Maximum exhaust gas flow	7,7 m ³ /min
Max. exhaust gas temp.	537 °C
Maximum back pressure	10 kPa (0,10 bar)
External diameter exhaust pipe	/
ELECTRICAL SYSTEM	
Starter motor power	3 kW
Battery charging alternator cap.	65 A
Cold start	- 10°C
With cold start aid	- 25 °C
AIR FILTER	
Combustion air flow	3.1 m ³ /min.
HEAT REJECTED AT FULL LOAD	
To exhaust system	35 kW - 1992 Btu/min.
To water and oil	30 kW - 1707 Btu/min
Radiated to room	8 kW - 455 Btu/min.
To charge cooler	/

ENDE-HITSI OY

Aallonkohina 2 A 4 02320 Espoo

puh. 050-4729304, 09-2219370

www.endehitsi.fi

ende-hitsi@endehitsi.fi



ALTERNATOR

SYNCHRONOUS, THREE-PHASE, SELF-EXCITED, SELF-REGULATED, BRUSHLESS	
Continuous power	50 kVA
Stand-by power	55 kVA
Three phase voltage	380-415 Vac
Frequency	50 Hz
Cos ϕ	0.8
Model A.V.R.	HVR-30 (3ph. sensing)
Voltage regulation acc.	± 1 %
Sustained short circuit current	3 In
Transient dip (100% load)	10 %
Recovery time	≤ 3 sec.
Efficiency at 100% load	89.4 % (400V - Cos ϕ 0.8)
Insulation	Classe H
Connection - Terminals	Stella - N°12
Electromagnetic compatibility (R.F.I. suppr.)	EN55011
Waveform distorsion - THD	< 3 %
Telephone interference - THF	< 2 %

REACTANCES (50 kVA - 400V)	
Direct axis synchronuos - Xd	255 %
Direct axis transient - X'd	20 %
Subdirect axis transient - X''d	7 %
Quadrature axis synchronuos - Xq	146 %
Quadr. axis subtransient - X''q	/
Negative sequence - X2	/
Zero sequence - X0	/
TIME CONSTANTS	
Transient - T'd	0.014 sec
Subtransient - T''d	0.009 sec
Open circuit - T'do	0.188 sec
Armature - Ta	/
Short-circuit ratio Kcc	0.62
Cooling air flow	0.17 m³/sec.
Coupling I Bearing	Diretto 3 - 11 ½ - N°1

GENERAL SPECIFICATIONS

Fuel tank capacity	100 lt.
Running time (75% to PRP)	12 h
Starter battery	12 Vdc -80 Ah
IP protection degree	IP 44

* Measured acoustic power LwA (pressure LpA)	90 dB(A) (65 dB(A) @ 7m)
* Guaranteed acoustic power LwA (pressure LpA)	91 dB(A) (66 dB(A) @ 7m)
Performance class (ISO 8528)	G2

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

CONTROL PANEL

- Controller IntelliNano Plus
- Controller supply switch
- Siren
- Emergency stop button
- TCM 35 remote control plug
- Thermal-magnetic circuit breaker
- ELCB-GFI (Ground Fault Interruptor)
- Power terminal-board
- Earth terminal (PE)

INTELINANO PLUS CONTROLLER CHARACTERISTICS	
Operating mode	• MAN. - AUTO
Display	• Graphic back-light LCD display 128x64 pixels
LEDs	• Engine operation • AUTO operating mode • Alarm
Buttons	• START button • STOP button • AUTO button • N° 2 buttons for controller programming
Generator Measures	• Voltage : L1-L2 • Current : I1 • Powers : kVA • Frequency
Engine Measures	• Water temperature (optional) • Oil pressure (optional) • Fuel level • Rpm meter • Battery voltage • Maintance • Hours meter

Generator Protections	• Short circuit • Over-Undervoltage • Over-Underfrequency • Phase sequence (Automatic control panel only)
Engine Protections	• 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
Features	• Event log and alarms (10 events) • Operator interface with icons, no text • Remote Start and Stop • Pre-heating • Fully programmable from the panel or from PC • Direct connection to engines with ECU via Can bus J1939 • Manual operation (MRS) with remote start • IP65 protection • Operation temperature: -20°C / +70°C
Communication	• Setup USB port • CAN BUS interface (J1939 only)

MANUAL CONTROL PANEL WITH SOCKETS

- Controller AMF 25
- Controller supply switch
- Siren
- Emergency stop button
- TCM 35 remote control plug
- Thermal-magnetic circuit breaker
- ELCB-GFI (Ground Fault Interruptor)
- Earth terminal (PE)

AMF25 CONTROLLER CHARACTERISTICS

Operating mode	• OFF - MAN. - AUTO - TEST
Display	• Graphic back-light LCD display 128x64 pixels
LEDs	• 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	• 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	• 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 - kVAh • Cos φ (medium and per phase) • Frequency
Engine Measures	• Water temperature • Oil pressure • Fuel level • Rpm meter • Battery voltage • Maintenance • Hours meter • Starts number
Generator Protections	• Overload • Overcurrent • Short circuit • Over-Undervoltage • Over-Underfrequency • Voltage asymmetry • Unbalanced current • Phase sequence
Engine Protections	• 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)

- 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

- 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

- 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

OUTPUT SOCKETS

SOCKETS

Each socket is protected by its own automatic switch.
Differential thermal magnetic circuit breaker 30mA for sockets 32A and 16A

- 1x 400V 63A 3P+N+T CEE - IP67
- 1x 400V 32A 3P+N+T CEE - IP67
- 1x 400V 16A 3P+N+T CEE - IP67
- 1x 230V 16A 2P+T CEE - IP67
- 1x 230V 16A 2P+T SCHUKO

AUTOMATIC CONTROL PANEL WITH SOCKETS

- Controller AMF 25
- Controller supply switch
- Emergency stop button
- TCM 35 remote control plug
- Connection terminal-board PAC (ATS)
- Battery charger
- Thermal-magnetic circuit breaker
- ELCB-GFI (Ground Fault Interruptor)
- Terminal block power
- Earth terminal (PE)

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WEIGHT - DIMENSIONS AND ACCESSORIES

GE 50 PS SX



DRY WEIGHT MACHINE:

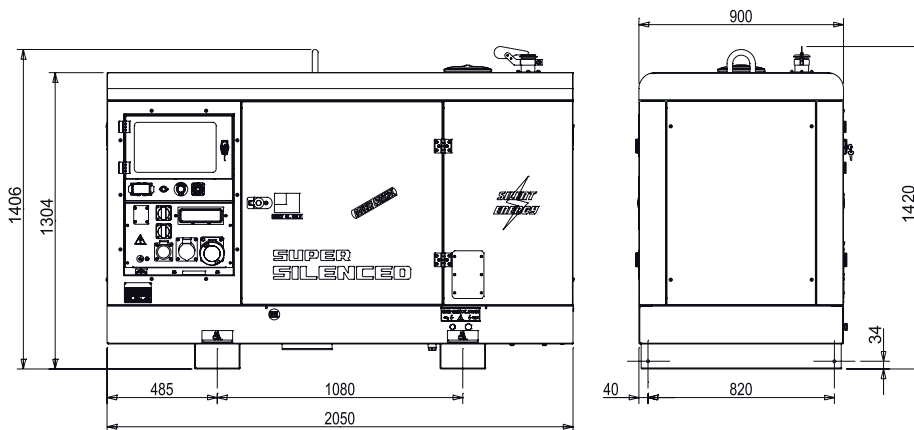
- 1100 Kg (tank version 100 lt)
- 1290 Kg (tank version 350 lt)

Generating set pictured may include optional accessories.



DIMENSIONS DRAWING (mm)

- 2050x900x1730 mm (350 lt tank)
- For the version with **100 lt tank**, see the images below.



OPTIONS ON REQUEST

- Automatic transfer switch unit PAC 70 (100A)
- Remote control TCM35
- Site tow CTL20
- Earthing kit
- Galvanized skid base frame
- Road trailer CTV1/O
- Road trailer CTV1/S



VERSIONS ON REQUEST

- Manual digital control panel with sockets
- Automatic control panel



FACTORY INSTALLATION OPTIONS

- Engine heater
- Gauges - water temperature and oil pressure
- Spark arrestor
- Cold start aid
- 3-way valve fuel system with quick connection for external fuel tank supply
- 350 litre internal tank
- Main battery switch
- Electronic leakage relay
- Low level water radiator sensor
- *Plug-in module with dual port RS232 and RS485
- *GSM modem with antenna
- *Internet-Ethernet plug-in module including Web server
- *Remote module for 15 alarms or states
- Isometer
- Radio control

* Only with AMF25

GENERAL INFORMATION

COMPLIANCE GENERATING SETS WITH EC DIRECTIVES AND STANDARDS

2006/42 / EC (Machines Directive)
2014/35 / EU (Low Voltage Directive)
2014/30 / EU (EMC Directive)
2000/14 / EC (Directive Acoustic Emission for machines for use outdoors)
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.

The company reserves the right to change this specification without notice. For further information please contact the sales department.

© MOSA - Viale Europa, 59 - 20090 Cusago (Milano) - Italy - phone +39-0290352.1 - fax + 39-0290390466 E-mail: info@mosa.it Web site: www.mosa.it

