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 cm³ (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 m³/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

EXHAUST SYSTEM	
Maximum exhaust gas flow	7,7 m³/mim
Max. exhaust gas temp.	537 °C
Maximum back pressure	10 kPa (0,10 bar)
External diameter exhaust pipe	/
ELECTRICAL SYSTEM	12 Vdc
Starter motor power	3 kW
Battery charging alternator cap.	65 A
Cold start	- 10°C
With cold start aid	- 25 °C
AIR FILTER	Dry
Combustion air flow	3.1 m³/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	/

* Output powers according to ISO 3046-1

ALTERNATOR

SYNCHRONOUS, THREE-PHASE, SELF-EXCITED, SELF-REGULATED, BRUSHLESS	
Continuos 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 %
Thelephone 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 m^3/sec.
Coupling | 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 InteliNano Plus
- Controller supply switch
- Siren
- Emergency stop buttom
- 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-Udervoltage • Over-Uderfrequency • Phase sequence (Automatic control panel only)
Engine Protections	• Overspeed • High water temperature warning • Low oil pressure warning • Low fuel level warning • Over-Uder 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 buttom
- 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 - kVARh • Cos φ (medium and per phase) • Frequency
Engine Measures	• Water temperature • Oil pressure • Fuel level • Rpm meter • Battery voltage • Maintance • Hours meter • Starts number
Generator Protections	• Overload • Overcurrent • Short circuit • Over-Udervoltage • Over-Uderfrequency • Voltage asymmetry • Unbalanced current • Phase sequence
Engine Protections	• Overspeed • High water temperature warning • Low oil pressure warning • Low fuel level warning • Over-Uder battery voltage • Battery charge alternator failure • Start failure • Stop failure • Emergency stop • Low water level shudown (option)
AMF functins (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 buttom
- 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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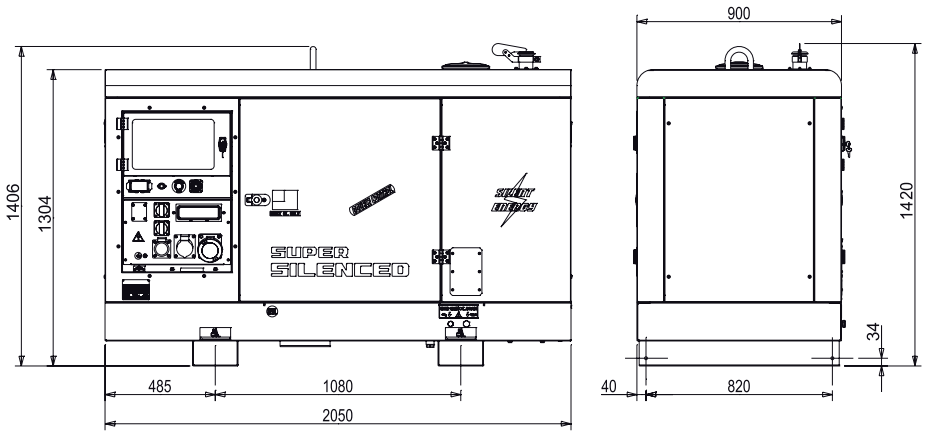
WEIGHT - DIMENSIONS AND ACCESSORIES

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 allarms 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.