

GENERATING SET GE 65 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
- Complies with regulation 2016/1628/EU FOR STATIONARY USE ONLY



water cooled



diesel



three-phase power



electric



super silenced

| POWER RATINGS | |
|------------------------------------|---------------------------------|
| * Stand-By three-phase power (LTP) | 66 kVA (52,8 kW) / 400V / 95.2A |
| * PRP three-phase power | 60 kVA (48 kW) / 400V / 86.6A |
| * PRP single-phase power | 22 kVA / 230V / 95.6A |
| * 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 STROKE, TURBOCHARGED | | |
|--|--|------------------------------------|
| Model | PERKINS - 1104D-44TG3 (In compliance with Stage 3A) | PERKINS - 1103A-33TG1 |
| Cylinders / Displacement | 4 / 4400 cm ³ (4.4 lt.) | 3 / 3300 cm ³ (3.3 lt.) |
| Bore / Stroke | 105 / 127 (mm) | |
| Compression ratio | 18.23 : 1 | 17.25 : 1 |
| * Stand-By net power | 59 kWm (80.2 hp) | 59.3 kWm (80.6 hp) |
| * PRP net power | 54 kWm (73.4 hp) | 53.8 kWm (73.1 hp) |
| * COP net power | / | |
| BMEP (Brake Mean Effective Pressure : LTP - PRP) | 1158 kPa - 1047 kPa | 1467 kPa - 1333 kPa |
| Speed governor type | Mechanical | |
| FUEL CONSUMPTION | | |
| 110 % (Stand-by power) | 235 g/kWh - 18.2 lt./h | 218.1 g/kWh - 15.4 lt./h |
| 100 % to PRP | 235 g/kWh - 16.5 lt./h | 217 g/kWh - 13.9 lt./h |
| 75 % to PRP | 232 g/kWh - 12.4 lt./h | 216.5 g/kWh - 10.4 lt./h |
| 50 % to PRP | 230 g/kWh - 8.3 lt./h | 225 g/kWh - 7.2 lt./h |
| COOLING SYSTEM | | |
| Total system cap. - only engine | 16.5 lt - 7 lt. | 10.2 lt - 4.4 lt. |
| Fan air flow | 82 m ³ /min. | 89 m ³ /min. |
| LUBRICATION SYSTEM | | |
| Total oil system capacity | 8 lt | 8.3 lt |
| Oil capacity in sump | 5.5 lt ÷ 7 lt | 6.2 lt ÷ 7.8 lt |
| Oil consumption at full load | < 0.015 lt./h | < 0.015 lt/h |

* Output powers according to ISO 3046-1

| EXHAUST SYSTEM | | |
|----------------------------------|---------------------------|--------------------------|
| Maximum exhaust gas flow | 12.5 m ³ /min | 10.4 m ³ /min |
| Max. exhaust gas temp. | 560 °C | 571 °C |
| Maximum back pressure | 12 kPa (0.12 bar) | 10 kPa (0.10 bar) |
| External diameter exhaust pipe | / | |
| ELECTRICAL SYSTEM | | |
| Starter motor power | 3.2 kW | 3 kW |
| Battery charging alternator cap. | 65 A | |
| Cold start | - 10°C | |
| With cold start aid | - 25 °C | |
| AIR FILTER | | |
| Combustion air flow | 4.9 m ³ /min. | 3.9 m ³ /min. |
| HEAT REJECTED AT FULL LOAD | | |
| To exhaust system | 57.8 kW - 2618.3 Btu/min. | 46 kW - 2618.3 Btu/min. |
| To water and oil | 46.8 kW - 2162.9 Btu/min | 38 kW - 2162.9 Btu/min |
| Radiated to room | 9.3 kW - 626.1 Btu/min. | 11 kW - 626.1 Btu/min. |
| To charge cooler | / | |

ALTERNATOR

| SYNCHRONOUS, THREE-PHASE, SELF-EXCITED, SELF-REGULATED, BRUSHLESS | |
|---|---------------------------|
| Continuous power | 60 kVA |
| Stand-by power | 65 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 | Class H |
| Connection - Terminals | Star - N°12 |
| Electromagnetic compatibility (R.F.I. suppr.) | EN55011 |
| Waveform distorsion - THD | < 3 % |
| Telephone interference - THF | < 2 % |

| REACTANCES (60 kVA - 400V) | |
|----------------------------------|--------------------------|
| Direct axis synchronous - Xd | 260 % |
| Direct axis transient - X'd | 21 % |
| Subdirect axis transient - X''d | 7 % |
| Quadrature axis synchronous - Xq | 148 % |
| Quadr. axis subtransient - X''q | / |
| Negative sequence - X2 | / |
| Zero sequence - X0 | / |
| TIME CONSTANTS | |
| Transient - T'd | 0.015 sec |
| Subtransient - T''d | 0.009 sec |
| Open circuit - T'do | 0.195 sec |
| Armature - Ta | / |
| Short-circuit ratio Kcc | 0.63 |
| Cooling air flow | 0.20 m³/sec |
| Coupling Bearing | Direct SAE 3 -11 ½ - N°1 |

GENERAL SPECIFICATIONS

| | | |
|---------------------------|---------------|-------|
| Fuel tank capacity | 100 lt. | |
| Running time (75% to PRP) | 8 h | 9.5 h |
| Starter battery | 12 Vdc -80 Ah | |
| IP protection degree | IP 44 | |

| | |
|--|--------------------------|
| * Measured acoustic power LwA (pressure LpA) | 91 dB(A) (66 dB(A) @ 7m) |
| * Guaranteed acoustic power LwA (pressure LpA) | 92 dB(A) (67 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
- Power terminal-board
- Earth terminal (PE)



| INTELINANO PLUS CONTROLLER CHARACTERISTICS | |
|--|---|
| Operating mode | <ul style="list-style-type: none"> • MAN.- AUTO |
| Display | <ul style="list-style-type: none"> • Graphic back-light LCD display 128x64 pixels |
| LEDs | <ul style="list-style-type: none"> • Engine operation • AUTO operating mode • Alarm |
| Buttons | <ul style="list-style-type: none"> • START button • STOP button • AUTO button • N° 2 buttons for controller programming |
| Generator Measures | <ul style="list-style-type: none"> • Voltage : L1-L2 • Current : I1 • Powers : kVA • Frequency |
| Engine Measures | <ul style="list-style-type: none"> • Water temperature (optional) • Oil pressure (optional) • Fuel level • Rpm meter • Battery voltage • Maintenance • Hours meter |

| | |
|-----------------------|--|
| Generator Protections | <ul style="list-style-type: none"> • Short circuit • Over-Udervoltage • Over-Uderfrequency • Phase sequence (Automatic control panel only) |
| Engine Protections | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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
- Terminal block power
- 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 • Maintance • 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 functins (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 |

| OUTPUT SOCKETS | |
|---|---|
| SOCKETS 63A socket is protected by its own circuit breaker. Every 16A and 32A socket is protected by its own circuit breaker and GFI 30mA. | 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
- Terminal block power
- 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 (medium and per phase) • Frequency |
| Engine Measures | <ul style="list-style-type: none"> • Water temperature • Oil pressure • Fuel level • Rpm meter • Battery voltage • Maintance • 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 functins (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 |
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WEIGHT - DIMENSIONS AND ACCESSORIES

GE 65 PSSX



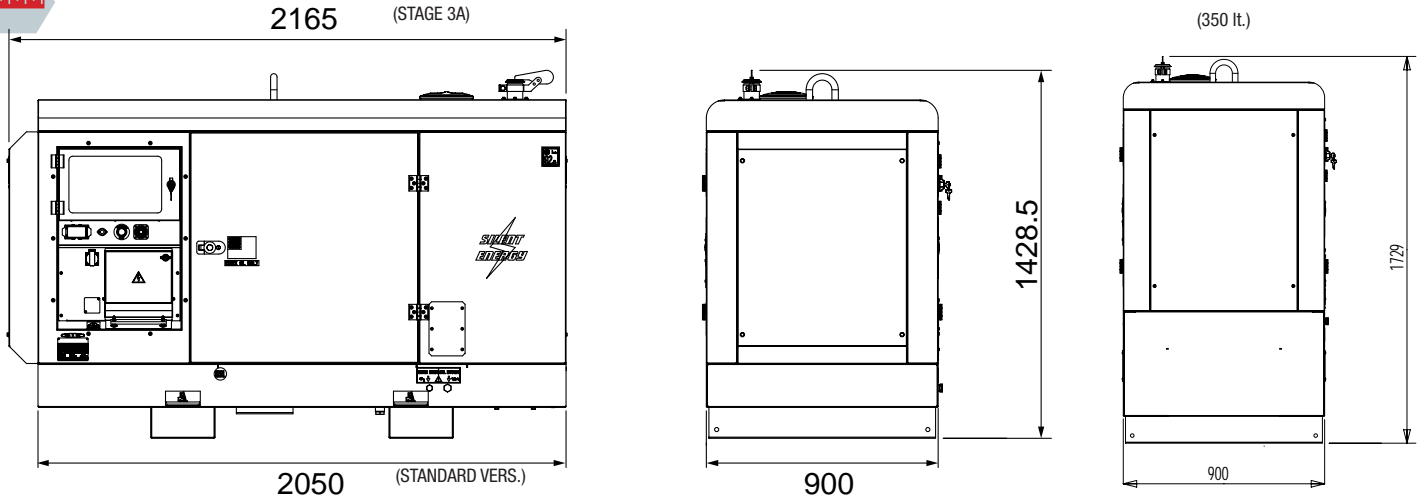
DRY WEIGHT MACHINE:

- 1200 Kg (tank version 100 lt)
- 1390 Kg (tank version 350 lt)

Generating set pictured may include optional accessories.



DIMENSIONS DRAWING (mm)



OPTIONS ON REQUEST

- Automatic transfer switch unit PAC 70 (100A)
- Remote control TCM35
- 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
- Electronic leakage relay type "B"
- *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 (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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