GENERATING SET
GE 200 FR-5

The images are for reference

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.

POWER RATINGS	
* Stand-By three-phase power	220 kVA (176 kW) / 400V / 317,5A
* PRP three-phase power	200 kVA (160 kW) / 400V / 288,7A
* COP power	160 kVA (128 kW) / 400V / 230,9A
Frequency	50 Hz
Cos φ	0.8

* Output powers according to ISO 8528-1

FEATURES

- Generator set RENTAL line.
- Engine compliant with STAGE 5 and EPA TIER 4B (Final)
- Electronic regulation of engine speed
- Exhaust gas post treatment composed of DOC + DPF + SCR
- Fuel pre-filter and filter with indicator of the presence of water in the fuel
- Oversized steel base to protect the hood
- Drag slide integrated into the base
- Anti-tipping side pockets for handling with forklifts
- N° 2 central lifting hooks
- Rounded edges to allow rainwater to flow
- Sealed base capable of containing any leaks of liquids present in the engine, avoiding environmental pollution
- Large capacity steel tank
- Adblue tank (urea solution)
- External access for cleaning and emptying the tank
- Large access doors to allow easy maintenance (replacing air, oil, fuel filters)
- Access door for ATS control and maintenance (exhaust gas post-treatment)
- Door with viewing porthole for the control panel
- External access for filling the radiator
- External cap for water drainage
- Oil extraction pump
- 3-way valve for transferring fuel from an external tank with quick filling connections housed in a special niche (OPTIONAL)
- Swinging rain cover at the exhaust gas outlet
- Low level of noise emissions
- Fuel level sensor
- Basement leak detection sensor
- Battery disconnect switch
- Emergency button
- Connection bars for power cables on the general circuit breaker
- Electrical distribution panel with three-phase and single-phase output sockets
- General four-pole thermomagnetic switch
- Electronic differential relay adjustable in current and trip time as standard with the electrical distribution panel
- Insulation monitor (as an alternative to the electronic differential relay)
- Top brand brushless alternator with three-phase sensing “AVR” electronic voltage regulation
- Alternator windings protected with marine impregnation

water cooled | diesel | three-phase power | electric

Engine 1500 rpm

4 STROKE, DIRECT INJECTION, TURBOCHARGED	
Model	FPT N67TEVP05.00
* Stand-By net power	195 kW (265,2 hp)
* PRP net power	176 kW (239,4 hp)
* COP net power	140 kW (190,4 hp)
Cylinders / Displacement	6 / 6,7 lit. (6700 cm³)
Bore / Stroke	104 / 132 (mm)
Compression ratio	17 : 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	2380 kPa (23,8 bar)
Speed governor type	Electronic
FUEL CONSUMPTION	
110 % (Stand-by power)	47,5 lt./h
100 % to PRP	42,9 lt./h
75 % to PRP	31,8 lt./h
50 % to PRP	21,3 lt./h
25 % to PRP	11,4 lt./h
ADBLUE TANK CAPACITY	43 lt. (53 lt max.)
110 % (Stand-by power)	4,4 lt./h (9,2 % fuel)
100 % to PRP	4,4 lt./h (10,2 % fuel)
75 % to PRP	3,3 lt./h (10,3 % fuel)
50 % to PRP	2,2 lt./h (10,2 % fuel)
25 % to PRP	1,1 lt./h (9,6 % fuel)
COOLING SYSTEM	
Total system cap. - only engine	27,6 lt – 12,6 lt.
Fan air flow	228 m³/min.

LUBRICATION SYSTEM	
Total oil system capacity	16 lit.
Oil capacity in sump	14,7 lt, ÷ 8,8 lt.
Oil consumption at full load	0.3 %
EXHAUST SYSTEM	
Maximum exhaust gas flow	16,6 kg/mim.
Max. exhaust gas temp.	550 °C
Maximum back pressure	2,5 kPa (25 mbar)
External diameter exhaust pipe	/
ELECTRICAL SYSTEM	24 Vdc
Starter motor power	4,0 kW
Battery charging alternator cap.	90 A
Cold start	- 15 °C
With cold start aid	/
AIR FILTER	Dry
Combustion air flow	13,6 kg/min.
HEAT REJECTED AT FULL LOAD	
To exhaust system	156,3 kW
To water and oil	84,7 kW
Radiated to room	14,4 kW
To charge cooler	27,2 kW
DERATING	
Ambient temperature	2% per 5°C > 40°C
Altitude above sea level	3% per 500m > 1000m < 3000m 6% per 500m > 3000m

* Output powers according to ISO 3046-1

Alternator

SYNCHRONOUS, THREE-PHASE, SELF-EXCITED, BRUSHLESS	
Continuos power	200 kVA
Stand-by power	220 kVA
Three phase voltage	380-440 Vac
Frequency	50 Hz
Cos φ	0.8
Model A.V.R.	HVR-30 (3ph. sensing)
Voltage regulation acc.	± 1.0 %
Sustained short circuit current	3 In
Transient dip (100% load)	< 10 %
Recovery time	< 0.3 sec
Efficiency at 100% load	91,7 % (400V - Cosφ 0,8)
Insulation	Class H
Connection - Terminals	Star (With N) - N°12
Electromagnetic compatibility (R.F.I. suppr.)	EN 55011
Waveform distorsion - THD	< 3 %
Thelephone interference - THF	< 2 %

REACTANCES (200 kVA - 400V)	
Direct axis synchronuos - Xd	389 %
Direct axis transient - X'd	21,0 %
Subdirect axis transient - X"d	11,1 %
Quadrature axis synchronuos - Xq	239 %
Quadr. axis subtransient - X"q	/
Negative sequence - X2	/
Zero sequence - X0	/
TIME CONSTANTS	
Transient - T'd	0,133 sec
Subtransient - T"d	0,017sec
Open circuit - T'do	1,81 sec
Armature - Ta	/
Short-circuit ratio Kcc	0.34
IP protection degree	IP 23
Cooling air flow	0,53 m³/sec.
Coupling I Bearing	Direct SAE 3 -11 ½ - N°1

General Specifications

Fuel tank capacity	520 lt.
Running time (75% to PRP)	16,5 h
Starter battery	24 Vdc [2x12Vdc-120Ah 830A CCA(EN)]

IP protection degree	IP 44
Acoustic pressure	69 dB(A) @ 7m
Performance class (ISO 8528)	G3

CONTROL PANEL

GE 200 FR-5

Digital Control Panel

- Intelilite4 AMF9 controller
- Power switch
- Siren
- Emergency stop button
- Forced regeneration button
- 1500-1800 rpm selector for forced regeneration
- 4-pole magnetothermal switch
- Electronic differential relay
- Earth terminal (PE)
- Output sockets: 1x 400V 125A 3P+N+T CEE IP67
  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
- Circuit breaker (for 125A socket)
- Differential-magnetothermal switch for 400V 63A socket
- Differential-magnetothermal switch for 400V 32A socket
- Differential-magnetothermal switch for 400V 16A socket
- 2x Differential-magnetothermal switch for 230V 16A socket

INTELILITE4 AMF9 CONTROLLER CHARACTERISTICS	
Operating mode	• OFF - MAN.- AUTO - TEST
Display - Pulsanti-LEDs	• Backlit display, LCD 132x64 pixels • Buttons / Buttons: START - STOP - RESET ALARMS / FAULT RESET • LEDs: Generator / GCB ON status - Grid status
Generator Measures	• Voltage : L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 • Current : I1 - I2 - I3 • Frequency Hz • Powers : kVA - kW - kVAR (totali e per fase) • Energy : kVAh - kWh - kVARh • Cos φ (medium and per phase)
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 history, 150 stored events • 3 programmable test timers • Programming from panel or from PC • 3 selectable languages (other languages available) • Direct connection to engines with ECU (Stage V, Tier 4 Final) via Can Bus J1939 • External Start and Stop • Programmable inputs and outputs • Alternative configurations (50 / 60Hz) • IP 65 protection • Operating temperature: -20 ° C - + 70 ° C
Communication	• USB port • RS232- RS485 (optional) • Modbus RTU / TCP (optional) • GSM modem. Commands alarms, events via SMS (optional) • Internet connection with Ethernet (optional) • Online control and monitoring on web pages (embedded web server) (optional) • SNMP (optional) • GPS / 4G modem (optional) (geographical tracking via WebSupervisor) • Internal PLC support

CONTROL PANEL

CONTROL PANEL DGUV-"B"

- Intelilite4 AMF9 controller
- Power switch
- Siren
- Emergency stop button
- Forced regeneration button
- 1500-1800 rpm selector for forced regeneration
- 4-pole magnetothermal switch
- Insulation monitor
- Equipotential earth terminal
- Output sockets: 1x 400V 125A 3P+N+T CEE IP67
  1x 400V 63A 3P+N+E CEE IP67
  1x 400V 32A 3P+N+T CEE IP67
  1x 400V 16A 3P+N+E CEE IP67
  2x 230V 16A 2P+E SCHUKO
- Circuit breaker (for 125A socket)
- Circuit breaker for 400V 63A socket
- Differential switch for 400V 63A socket - Type B
- Differential-magnetothermal switch for 400V 32A socket - Type B
- Differential-magnetothermal switch for 400V 16A socket - Type B
- 2x Circuit breaker for 230V 16A Schuko socket - Type B

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Display - Pulsanti-LEDs	• Backlit display, LCD 132x64 pixels • Buttons / Buttons: START - STOP - RESET ALARMS / FAULT RESET • LEDs: Generator / GCB ON status - Grid status
Generator Measures	• Voltage : L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 • Current : I1 - I2 - I3 • Frequency Hz • Powers : kVA - kW - kVAR (totali e per fase) • Energy : kVAh - kWh - kVARh • Cos φ (medium and per phase)
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
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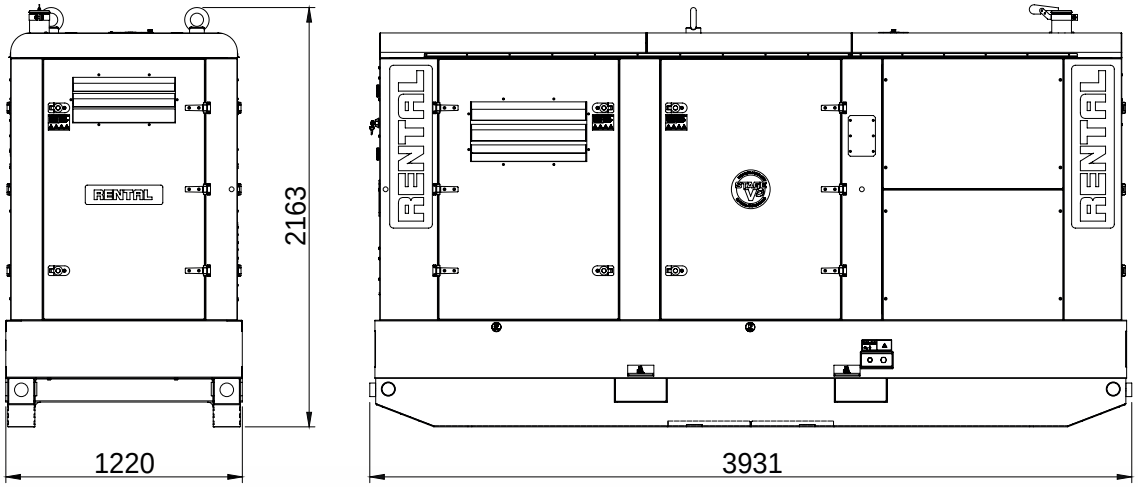
WEIGHT - DIMENSIONS AND ACCESSORIES

DRY WEIGHT MACHINE:
- 2900 Kg

Generating set pictured may include optional accessories.

DIMENSIONS DRAW



VERSIONS IN ADDITION TO THE STANDARD FEATURES

	HEATER	3WAY	DGUV
3-way valve		√	
Engine water heater + Battery Charger	√		
Isometer I GFI Type B			√

ACCESSORIES ON REQUEST

- Internet / Ethernet plug-in module with Web Server
- GPS / 4G modem with antenna
- Plug-in module with double RS232 and RS485 ports
- Report card 15 alarms / states (configurable)
- Remote control panel (ATS) PAC-I 275-M (24V - 400A)
- Remote control TCM35
- MT75 grounding

AVAILABLE VERSIONS

CP4U90G1	STANDARD
CP4U90G1A	HEATER
CP4U90G1H	3WAY
CP4U90G1AH	3WAY + HEATER
CP4U90U1	DGUV
CP4U90U1A	DGUV + HEATER
CP4U90U1H	DGUV + 3WAY
CP4U90U1AH	DGUV + 3WAY + HEATER

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 9001:2008 - Cert. 0192

WARRANTY
All devices are covered by the manufacturer's warranty.