



STRONG

Genmac provides one-source responsibility for the generating system and accessories.

- All units and components are prototype tested, factory build and production tested. A specific control procedure during the several stages of production ensures long life and reliability.
- Rugged 4 cycle heavy-duty Industrial diesel engine, of primary brands with direct fuel injection system and swirl intake ports combine for a low fuel consumption and excellent transient response.
- Powerful alternators with insulation system of H class and impregnation made with tropicalized epoxy resins, are used as standard.
- Generator set accepts one-step 100% of full load.
- The variation of the Voltage is maintained between +1% by sophisticated Electronic Voltage Regulators.
- Fully programmable Autostart controller is supplied with auto start control system and digital instrumentation. Automatic device for setting the periodic exercise is integrated.
- Heavy-duty built-in anti-vibration insulators assures lower noise and longer components life.
- Protection guards on rotating parts
- Four lifting brackets are supplied on the base frame
- The Silent version consist of a weather-proof bolted modular pre-painted enclosure (2000/14/CE compliant) with hinged lockable doors, radiator coolant hatch, base mounted radiator coolant and engine oil drain lines. These items affords superior flexibility and ease of maintenance.
- A stub-up area is provided to make easier the electrical connection to the load.
- A wide range of accessories is provided on request in order to satisfy the needs of the user and to let the generator work in almost every condition.

RATINGS

Model	Voltage	Phase	Hz	Power Factor	Standby KW	Standby KVA	Standby Amps	Prime KW	Prime KVA	Prime Amps	Starting KVA
G45P	230/400	3	50	0.8	38	48	69	36	45	65	N/A
GU50P	480/277	3	60	0.8	45	56	68	41	51	61	N/A
GU50P	440/254	3	60	0.8	45	56	74	41	51	67	N/A
GU50P	380/220	3	60	0.8	37	47	71	34	43	65	N/A
GU50P	240/138	3	60	0.8	45	56	135	41	51	123	N/A
GU50P	220/127	3	60	0.8	45	56	147	41	51	134	N/A
GU50P	208/120	3	60	0.8	44	55	153	40	50	139	N/A
GU50P	240/120	1	60	1.0	30	30	124	27	27	113	N/A
RGU50P	380/220**	3	60	0.8	44	55	84	40	50	76	N/A
RGU50P	208/120**	3	60	0.8	47	58	162	43	53	148	N/A
RGU50P	240/120**	1	60	1.0	44	44	182	40	40	165	N/A

(**) with oversized alternator

RATING DEFINITION

Standby Rating: Applicable for supplying emergency power for the duration of normal power interruption limited to maximum 500h per year within the following maximum operating time: 100% load 25h per year, 90% load 200h per year.

No overload capability is permitted for this rating. "Limited Time running Power (LTP)" rating conforms to ISO 8528-1.

Prime Rating: Applicable for supplying power at a variable load for an unlimited number of hours per year. A 10% overload capability is available for one hour in twelve hours periods. This rating conforms to ISO 8528-1 "Prime Running Power (PRP)".

STANDARD REFERENCE CONDITIONS:

The above mentioned power data are calculated with: air temperature of 25°C (77°F); 99kPa of barometric pressure, 100m of altitude a.s.l and 30% of relative humidity. For different conditions please refer to the derating factor's table specific for this engine.

INSTALLATION AND APPLICATION DATA

	Units	50 Hz		60 Hz		
		PRP	LTP	PRP	LTP	
General	Emission certificates	NOT CERTIFICATED		NOT CERTIFICATED		
	Noise level (silent version)	dB(a) 7mt	69		69	
	Rated Speed	rpm	1500		1800	
Engine basic data	Engine Brand - Model	Perkins – 1103A 33TG1		Perkins – 1103A 33TG1		
	Gross Engine Output	hp (KW)	57,4 (42,2)	63,2 (46,5)	68,7(50,5)	75,6 (55,6)
	Number and arrangement of cylinders	3 vertical in-line				
	Type of air intake	Turbocharged				
	Type of cooling	Water-cooled				
	Total displacement	liters (cu. In.)	3.3 (201)			
	Bore x Stroke	mm (in.)	105(4.13) x 127 (5.0)			
	Speed control	Mechanical				
	Speed drop	+- 0,75%				
Fuel system	Type of fuel	Diesel				
	Maximum Fuel Transfer Pump Lift-	kPa	17			
	Fuel consumption @ 25% load	Liters/h (gal/h)	3,4 (0,9)	N/A	4,3 (1,1)	N/A
	Fuel consumption @ 50% load	Liters/h (gal/h)	5,7 (1,5)	N/A	7,1 (1,9)	N/A
	Fuel consumption @ 75% load	Liters/h (gal/h)	8,2 (2,2)	N/A	9,9 (2,6)	N/A
	Fuel consumption @ 100% load	Liters/h (gal/h)	10,7 (2,8)	12,0 (3,2)	12,9 (3,4)	14,3 (3,8)
	Standard fuel tank capacity (silent)	Liters (gal)	70 (18.5)			
Oil	Type of oil (for usage at std reference conditions)	15W40 to API CG4				
	Total Quantity of oil (including filters)	Liters (qt.)	8.3 (8.8)			
	Maximum Oil consumption	0,15% of fuel consumption				
Coolant	Type of coolant	Glicole Mixture 50% Antifreeze – 50% demineralized water				
	Total quantity of coolant	Liters (qt)	10.2 (10.76)			
Air system	Air filter type	Dry Element				
	Max. perm. intake vacuum	kPa (in.H ₂ O)	5			
	Combustion air flow	m ³ /min (cf/min)	2,9 (102.4)	3,1 (109.4)	3,7 (130,6)	3,9 (137,7)
Exhaust system	Exhaust flow	m ³ /min (cf/min)	7,0 (247.2)	7,7 (271.9)	8,8 (310,7)	9,5 (335,4)
	Max. permissible exhaust backpressure	kPa	10		15	
	Outlet size diameter	mm (in.)	50 (1,88)			
Electrical system	Voltage of electric system	V	12			
	Starter motor capacity	A	250			
	Type of battery	Lead acid type				
Alternator	Number of poles	4				
	Number of bearings	1				
	Excitation	Self excited				
	Type of regulation	Automatic Voltage Regulation				
	Regulator model	DSR				
	Voltage accuracy	±1 % with any power factor and speed variations between -5% +30%				

STANDARD EQUIPMENTS

ENGINE

- Air Cleaner (Dry-cartridge type)
- Fuel Pump
- Fuel Filter
- Fuel stop solenoid
- Thermostat and Housing
- Dry Exhaust Manifold
- Blower Fan & Fan Drive
- Radiator - Unit Mounted
- Electric Starting Motor
- Housing & Flywheel
- Charging Alternator
- Battery Rack & Cables
- First filling of oil and filters *
- First filling of coolant *
- Oil draining mechanical pump
- Coolant drain with tap

* unless differently stated by selected means of transport

GENERATOR

- Self-ventilated and drip-proof construction
- Synchronous, Brush-less, Self Exciting , Self Regulating
- Direct Coupled With Flex Disk
- 12 Leads winding
- Class H Insulation
- Drip-Proof Construction
- Humidity Tropical Protection
- Radio Interference Suppressor EMC Filter

EXHAUST

- Built-in Residential Muffler
- Rain Cap

HANDLING

- Lifting and holding down points

BASE FRAME

- Heavy duty fabricated welded base plate with high quality steel.
- Heavy duty rubber anti-vibration mountings
- Integrated fuel tank with drain plug and low fuel alarm
- Stub-up area

PHYSICAL DATA

	Units	Strong G45PSM	Strong GU50P
Length	mm (in.)	2250 (88.6)	2250 (88.6)
Width	mm (in.)	960 (37.8)	960 (37.8)
Height	mm (in.)	1038 (40.9)	1038 (40.9)
Weight	Kg (lbs)	1247 (2749)	1247 (2749)

ELECTRICAL SYSTEM

- **Battery (for 50Hz is supplied as standard, for 60Hz is to be ordered separately)**
- Battery rack and cables
- Engine driven battery charger

CANOPY (for silent units)

- Nylon hinges
- Heavy duty lockable handles in each door
- Num 3 large doors for easy access for service and monitoring
- Coolant refilling specific hatch
- Fireproof sound foam, self extinguishing compliant with class 1.
- Modular bolted assembly after painting.
- Grey RAL 7035 "orange peel" specific powder coat paint for outdoor usage
- Weatherproof sealed joints.
- Cut using high precision laser technology.
- Bent using high precision numeric control technology.
- Glazed acoustic sealed control panel door.
- Fuel filler outside enclosure.
- In base oil and coolant drains

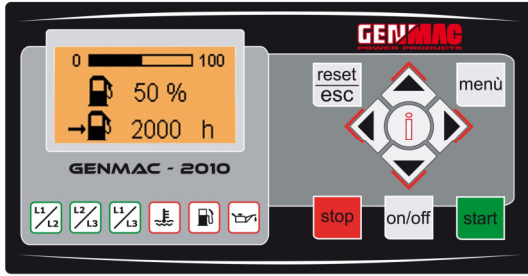
CONTROL PANEL (see specific section below)

- Autostart controller C-2010
- Three phase sensing for voltage and currents
- **Circuit breaker (for 50Hz-230/400V is supplied as standard, for other voltages is to be ordered separately)**
- Emergency stop button
- External ATS connection board
- EC Conformity in compliance with EN 60439-1
- Electronic Battery charger **(for 60Hz versions is supplied as standard, for 50 Hz versions is to be ordered separately)**

PACKAGING

- Carton box
- Alternator, Engine and Generating set operator's manual are supplied together with electrical drawings

CONTROL PANEL



CIRCUIT BREAKER

50Hz – 400V generators are supplied together with a circuit breaker that permits a thermal protection against overloads and magnetic protection against short-circuit.

For **60Hz or 50Hz-230V** versions the circuit breaker has to be ordered separately indicating the voltage at which the generator has to work. All the generator of this line are fully re-connectable according to the specification indicated in the "RATINGS BOOK"

QUICK CONNECTOR FOR REMOTE START

A 10 pin terminal board is supplied in order to connect easily the generator to an external device for remote start and stop.

AUXILIARY SOCKETS (For 50Hz versions only)

A special box with 1 three phase 400V 63A socket, 1 three phase 400V 32A socket and 1 single phase 230V 16A socket is supplied in order to ease the fast connection between the generator and the electrical line or between the generator and the loads.

TERMINAL BOARD (For 60Hz versions)

An internal terminal board with blocks is provided to make easier the connection from the load to the generator output.

COMMANDER C-2010

Auto-start controller C-2010 it is used to command and control manually the generators. The remote start/stop function offers a greater versatility of application of the generator. Besides the simplicity of use, the display allows to receive every information necessary for a fast monitoring of the functioning state of the generator.

- > Very easy to use: On/Off to turn-on and turn-off START and STOP buttons
- > Compact, elegant and functional design
- > Simple keyboard with 5 buttons for an easy navigation
- > Clear display 128x64 pixel, backlighted and multilanguage (Russian included)
- > 3 leds to indicate immediately the presence or lacking of the phases
- > 3 leds for an immediate indication of the main alarms: oil, temperature and fuel
- > 3 instruments for engine measures programmable for any type of sensor and for different unite of measure (Optional)
- > 26 measures available on the display
- > Measures uncertainty < 1%
- > 33 generator alarms
- > Events log
- > Engine periodic service indication
- > Battery periodic service indication
- > Isolation between phases and ground > 1 Mohm, to be used on ships.
- > Remote start and stop with programmable start trials
- > Timer start/stop for programmed work cycles
- > Multicontroller connection via RS485
- > 3 outputs for alarms report, to connect to the alarms report box (RA2010)
- > Output to command the genset transfer switch
- > 1 RS232 output for programming or GSM module connection - 1 RS485 output
- > GSM communication to send commands or receive information on 2 different numbers (with GSM modem kit to be ordered separately)
- > Direct information of the autonomy time

Display Information

- > Voltage L1-L2 [Vac] - L2-L3 [Vac] - L3-L1 [Vac]
- > Voltage L1/N-L2/N-L3/N
- > Buffer charge voltage [Vdc]
- > Current L1 [A] - L2 [A] - L3 [A]
- > Frequency [Hz]
- > Cosj [0,00 ÷ 1,00]
- > Active power [kW]
- > Reactive power [kVAR]
- > Apparent power [kVA]
- > kWh
- > Oil pressure [bar-psi] (Optional)
- > Engine temperature [°C-°F] (Optional)
- > Fuel level [Litres-Gallons] (Optional)
- > Work autonomy [h]
- > Work hours
- > Daily work hours
- > Partial work hours in automatic mode
- > Partial work hours of a programmed start
- > Time to service
- > Warranty expiry
- > Time to battery service
- > Alarm (type + icon)

Technical data

- > Protection IP65
- > Working temperature -20°C + 70°C
- > Stacking temperature -30°C + 80°C
- > Range Vdc 8..35
- > Range Vac 50..500
- > Range Hz 50..60
- > Display 128x64 pixel, 62x33 mm
- > Reference EN61010

Alarms

- > Emergency stop
- > Warranty expired
- > Service
- > Rental hours expired
- > Battery maintenance
- > Charger alternator failure
- > Programmable alarm
- > Stop engine failure
- > Generator block
- > First service
- > Faulty oil pressure digital
- > Chance of fuel leakage
- > Start failed
- > Mechanical fault
- > Temperature prealarm (analogic-Optional)
- > High engine temperature (analogic-Optional)
- > High engine temperature (digital)
- > Fuel prealarm Analogic sensor (Optional)
- > Low fuel level Analogic sensor (Optional)
- > Low fuel level Digital sensor
- > Oil pressure prealarm Analogic sensor (Optional)
- > Low oil pressure Analogic sensor (Optional)
- > Low oil pressure Digital sensor
- > High battery voltage
- > Low battery voltage
- > Autonomy low
- > Generator low frequency
- > Generator high frequency
- > Generator low voltage
- > Generator high voltage
- > Generator wrong phase sequence
- > Generator current overload
- > Generator short-circuit current

OPTIONAL EQUIPMENTS

A wide range of optional equipments are available to satisfy all the needs of the installer. Please contact GenMac's sales department for full details of these and other options

ENGINE

- Starting aids (glow plugs-coolant heaters-oil heaters ..)
- Double-stage fuel filters

GENERATOR

- Thermal protections
- Anti-condensation heaters
- Special treatment for usage in marine environmental conditions
- Oversized alternator for single phase connection

EXHAUST

- Exhaust adapters
- Extension exhaust hose
- Silenced exhaust terminals

BASE FRAME

- Automatic Refuelling kit from external tank with electric pump and electric valve.
- Sub base frames with bigger skid mounted fuel tanks
- External Storage Tanks
- Double wall UL compliant fuel tanks

ELECTRICAL SYSTEM AND CONTROL PANEL

- Auxiliary sockets and plugs
- Fuel level gauge
- Oil pressure meter
- Water temperature meter
- Generator Monitoring/Remote control of complete system (with analog, GSM or Ethernet connection)
- Automatic Mains Failure Controllers
- Automatic Transfer Switches

HANDLING AND CANOPY

- Central lifting hook
- Drip Tray
- Slow drive trailers

MAINTENANCE

- Consumable Filters and spares for each maintenance interval

WARNINGS

- Access to control panel and doors on both sides for inspection and maintenance is required.
- Adequate ventilation on both sides is required.

WARRANTY

Please refer to Genmac for warranty policy described into WG001 module.

All Specifications and Materials are subject to change without prior notice.



GENMAC Group:

Head Quarter

Genmac S.r.l.

42044 Gualtieri, (Reggio Emilia) Italy
via Don Minzoni, 13
Tel. (+39) 0522 828 179
Fax (+39) 0522 829 218

E-mail: info@genmac.it

Web space: www.genmac.it

Subsidiary

Genmac USA, Inc.

7060 NW 52nd STREET
MIAMI - FL 33166 - U.S.A.
Ph. (+1) 305 599 80 99
Fax (+1) 305 599 80 98

Toll Free Dial # 1-877-257-4541

E-mail : genmacusa@genmac-group.com

Web space: www.genmac-group.com

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