

GTW22P



Power Rating

Emergency Standby Power ESP	kVA	22.0
Emergency Standby Power ESP	kW	17.6
Prime power PRP	kVA	20.0
Prime power PRP	kW	16.0
Voltage	V	400/230
Frequency	Hz	50
Power factor	cos ϕ	0.8
Phases		3
Fuel		Diesel



Ratings definition (ISO-8528)

ESP - Emergency Standby Power:

It is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP.

PRP - Prime Power:

It is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output over 24 h of operation shall not exceed 70 % of the prime power.

G2 class load acceptance in accordance with ISO 8528-5:2013 Higher performance classes check upon request.

Gensets are compliant with EC mark which includes the following directives:

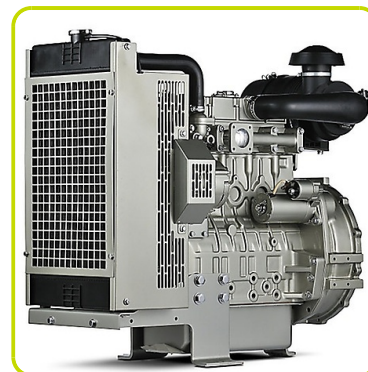
- 2006/42/CE Machinery safety.
- 2014/30/UE Electromagnetic compatibility.
- 2014/35/UE electrical equipment designed for use within certain voltage limits
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC) – If applicable
- 97/68/EC Emissions of gaseous and particulate pollutants. (amended by 2002/88/EC & 2004/26/EC) – If applicable
- EN 12100, EN 13857, EN 60204

Company with quality certification ISO 9001



Engine specifications

Engine brand	Perkins	
Model	404A-22G1	
Operation Speed Nominal	rpm	1500
Engine cooling system	Water	
Exhaust emission level	Non Emission Certified	
Nr. of cylinder and disposition	4 in line	
Displacement	cm ³	2216
Aspiration	Type	Natural
Speed governor	Mechanical	
Gross Engine Power ESP	kWm	20.6
Gross Engine Power PRP	kWm	18.7
Fan Power	kWm	0.3
Fan Air flow	m ³ /min	40.2
Total Oil capacity	l	10.6
Total Coolant capacity	l	7
Fuel	Diesel	
Specific Fuel consumption 75% PRP	g/kWh	238
Starting system	Electric	
Electric circuit	V	12



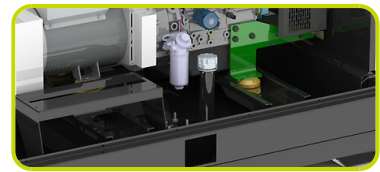
Alternator specifications

Alternator brand	Mecc alte	
Model	ECP28 M4 C	
Winding	Standard	
Winding Connections	Type	Series Star
Frequency	Hz	50
Voltage	V	400
Phases	3	
Power factor	cos ϕ	0.8
Stand-by rating 27°C	kVA	22
Continuous Nominal Rating 40°C	kVA	20
Efficiency @ 100% of load	%	87
Type	Brushless	
Poles	4	
Standard AVR	DSR	
Voltage tolerance	%	1
Class	H	
IP protection	23	
Cooling air	m ³ /s	0.11



STEEL SUPPORTING FRAME:

- Sturdy Supporting Frame for moto-alternator and canopy.
- Anti-vibration mounting properly sized.



BASEFRAME WITH INTEGRATED METAL FUEL TANK:

- Metal fuel tank.
- Filler neck.
- Air breather (ventilation pipe).
- Minimum fuel level sensor.
- Fuel refilling point inside the canopy, protected by lockable doors.
- Base forcable by forklift.



EASY AND FAST MAINTENANCE SERVICE:

- Four large lateral doors for an easy maintenance & service.
- Oil drainin pipe with cap.
- Kit 1000hr free maintenance available as option.



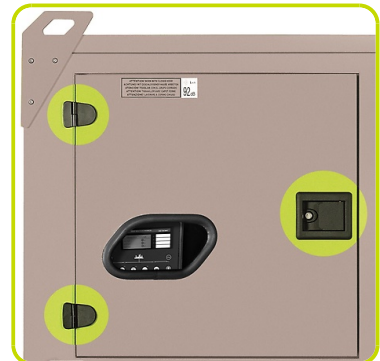
ENGINE COMPLETE WITH:

- Battery
- Liquids (No Fuel)
- Water temperature sensor
- Lube oil pressure sensor



PROTECTIONS ANTITHEFT / VANDALISM:

- Anti-theft screws.
- Key Lockable door.
- Anti-theft hinges.
- Fuel refilling point inside the canopy, protected by key lockable doors.
- Control panel positioned inside the canopy, protected by key lockable door.
- Remote Control (available as option).
- Door switches with alarm from control unit (available as option)



STACKABLE CANOPY:

- Weatherproof enclosure made of galvanized sheet metal.
- Noise attenuation thanks to Soundproofing material.
- Four removable lifting points for easy Handling.
- Control Panel inside the canopy, protected by door provided with window and lockable handle.
- Front easy access power cable passage.
- Lateral air inlet opening properly protected and soundproofed.
- Exhaust air outlet from the roof, trough wet section protected by rain flap.
- Efficient residential silencer placed inside the canopy.



Automatic Control Panel (ACP)

Mounted on the genset, complete with Automatic control unit for monitoring, control and protection of the generating set, protected through door with lockable handle.

DIGITAL INSTRUMENTATION

- Generating set voltage (3 phases).
- Mains voltage.
- Generating set frequency.
- Generating set current (3 phases).
- Battery voltage.
- Power (kVA - kW - kVA_r).
- Power factor Cos φ.
- Hours-counter.
- Engine speed r.p.m.
- Fuel level (%).
- Engine temperature.

COMMANDS AND OTHERS

- Four operation modes: OFF - Manual starting - Automatic starting - Automatic test.
- Pushbutton for forcing Mains contactor or Genset contactor.
- Push-buttons: start/stop, fault reset, up/down/page/enter selection.
- Remote starting availability.
- Acoustic alarm.
- Battery charger.
- USB, RS232 and RS485 communication ports
- Settable PIN for protection level.

PROTECTIONS WITH ALARM

- Engine protections: low fuel level, low oil pressure, high engine temperature.
- Genset protections: under/over voltage, overload, under/over frequency, starting failure, under/over battery voltage

PROTECTIONS WITH SHUTDOWN

- Engine protections: low fuel level, low oil pressure, high engine temperature,
- Genset protection: under/over voltage, overload, under/over battery voltage, battery charger failure.
- Four poles circuit breaker protection.

OTHERS PROTECTIONS

- Emergency stop button.
- Panel protected through door with lockable handle.

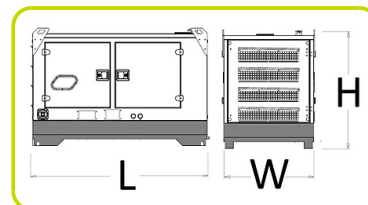
OUT PUT PANEL

Front easy access power cable passage:	√
Power Cables Connection to:	Power Terminals
Predisposed for remote control optional:	RGW



Dimensional data

Length	(L) mm	1920
Width	(W) mm	1010
Height	(H) mm	1286
Dry weight	kg	795
Fuel tank material		Metal
Fuel tank capacity	l	80



Autonomy

Fuel consumption 75% PRP	l/h	3.94
Running time 75% PRP	h	20.30
Fuel consumption 100% PRP	l/h	5.27
Running time 100% PRP	h	15.18

Noise Level

Guaranteed noise level (LWA)	dB(A)	92
Noise pressure level @ 1 m	dB(A)	76
Noise pressure level @ 7 m	dB(A)	63



Installation data

Cooling air	m ³ /min	48
Exhaust gas flow PRP	m ³ /min	3.64
Exhaust gas temperature	°C	505

Electrical Data

Max current	A	32
Nominal current	A	29
Circuit breaker	A	32

Other configurations and options available:

GTW / LR Long Running	√
GTW / SS Super Silent	√
GTW Design Combination	√
Monoblock Protections and Longer Service Options	√
Anti-theft options	√
Fuel tank options	√
Electrical options	√

GTW / LR LONG RUNNING:

Designed in order to reduce the fuel refilling frequency, allowing a valuable cost reduction of the **fuel transportation**.

Are available different Metal extended fuel tank single or double wall:



Autonomy with EFT:

EFT0 - Running time 75% PRP	h	50.76
EFT1 - Running time 75% PRP	h	126.90
EFT2 - Running time 75% PRP	h	253.81
EFT3 - Running time 75% PRP	h	380.71
EFT4 - Running time 75% PRP	h	507.61

Extended Fuel Tank EFT0

Fuel tank capacity	l	200
Length (Genset)	(L) mm	1920
Width (Genset)	(W) mm	1010
Height (Genset)	(H) mm	1481
EXTRA - Dry weight EFT Single Wall:	Kg	60
EXTRA - Dry weight EFT Double Wall:	Kg	135



Extended Fuel Tank EFT1

Fuel tank capacity	l	500
Length (Genset)	(L) mm	1920
Width (Genset)	(W) mm	1010
Height (Genset)	(H) mm	1662
EXTRA - Dry weight EFT Single Wall:	Kg	74
EXTRA - Dry weight EFT Double Wall:	Kg	159



Extended Fuel Tank EFT2

Fuel tank capacity	l	1000
Length (Genset)	(L) mm	1920
Width (Genset)	(W) mm	1010
Height (Genset)	(H) mm	1992
EXTRA - Dry weight EFT Single Wall:	Kg	120
EXTRA - Dry weight EFT Double Wall:	Kg	294



Extended Fuel Tank EFT3

Fuel tank capacity	l	1500
Length (Genset)	(L) mm	1920
Width (Genset)	(W) mm	1010
Height (Genset)	(H) mm	2333
EXTRA - Dry weight EFT Double Wall:	Kg	384



Extended Fuel Tank EFT4

Fuel tank capacity	l	2000
Length (Genset)	(L) mm	2520
Width (Genset)	(W) mm	1010
Height (Genset)	(H) mm	2333
EXTRA - Dry weight EFT Double Wall:	Kg	417



GTW / SS- Super Silent

Designed in order to reduce the noise level emissions.

The Super Silent version is particularly suitable for BTS located near or inside the city centre or in any place where noise level emission restrictions are present.

Modular design, allows to retrofit the sound attenuation modules (SA), giving the possibility to transport genset and SA separately and to reassemble it on site.



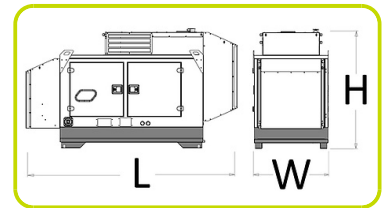
Noise Level

Guaranteed noise level (LWA)	dB(A)	84
Noise pressure level @ 1 m	dB(A)	67
Noise pressure level @ 7 m	dB(A)	55



Dimensional data

Length	(L) mm	2800
Width	(W) mm	1010
Height	(H) mm	1570
EXTRA - Weight Canopy Super Silent	Kg	113



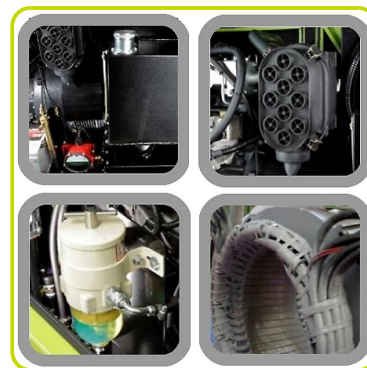
GTW Design Combination

GTW Series design offers several different versions thanks to the total Modularity-Product-Concept.



Monoblock Protections and Longer Service - Options Available:

Manual oil drain pump	MOP
Automatic Lube Oil	ALS
Oversized Lube Oil Filter	OLF
Water Separator Filter	WSP
Heavy Duty Filter	HDF
Pre-heating system	PHS
Windings Total Protection (Alternator)	WTP
Anti-Condensation Heater (Alternator)	ACH
Ingress Protection (Alternator)	IP45



Anti-Theft - Options Available:

Vandal Proof Handle	VPH
Door Switches	DSW



Fuel Tank - Option Available:

External Fuel Refiling	EFR
Automatic Fuel Pump	AFP
Electric Fuel Pump	EFP



Electrical - Option Available:

Transfer switch	TWS
Terminal Low Potential	TLP
Remote Gateway	RGW
Electronic Engine Governor	EEG
Surge Suppressor	SSP
Engine Analogue Gauges	EAG
Fuel Analog Gauge	FAG
Low Coolant Level	LCL
Output DC	ODC



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