GSW45P



Main Features		
Frequency	Hz	50
Voltage	V	400
Power factor	cos ϕ	0.8
Phase		3

Power Rating		
Standby power LTP	kVA	48.00
Standby power LTP	kW	38.40
Prime power PRP	kVA	45.64
Prime power PRP	kW	36.51

Ratings definition (According to standard ISO8528 1:2005)

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.

LTP - Limited-Time running Power:
It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 h of operation per year (whose no more than 300 for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

www.pramac.com

Engine specifications		
Engine manufacturer		Perkins
Model		1103A-33TG1
[50Hz] Exhaust emission level		Non Emission Certified
Engine cooling system		Water
Nr. of cylinder and disposition		3 in line
Displacement	cm^3	3300
Aspiration		Turbocharged
Speed governor		Mechanical
Prime gross power PRP	kW	42.2
Maximum gross power LTP	kW	46.5
Oil capacity	l	7.9
Lube oil consumption @ PRP (max)	%	0.15
Coolant capacity	l	10.2
Fuel		Diesel
Specific fuel consumption @ 75% PRP	g/kWh	217.6
Specific fuel consumption @ PRP	g/kWh	213
Starting system		Electric
Starting engine capability	kW	3
Electric circuit	V	12



Engine Equipment

Standards

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1

Fuel system

Rotary type pump

Lube oil system

Wet steel sump with filler and dipstick

Filter

- Fuel filter
- Air filter
- Oil filter

Cooling system

- Mounted radiator
- Thermostatically-controlled system with belt driven coolant pump and pusher fan

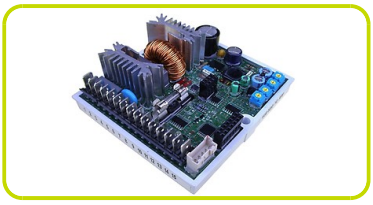
www.pramac.com

Alternator Specifications		
Alternator		Mecc Alte
Model		ECP 32-3S/4 B
Voltage	V	400
Frequency	Hz	50
Power factor	cos ϕ	0.8
Type		Brushless
Poles		4
Standard AVR		DSR
Voltage tolerance	%	1
Efficiency @ 75% load	%	88.7
Class		H
IP protection		23



Mechanical structure
Robust mechanical structure which permits easy access to the connections and components during routine maintenance check-ups.

Voltage regulator
Voltage regulation with DSR. The digital DSR controls the range of voltage, avoiding any possible trouble that can be made by unskilled personnel. The voltage accuracy is ±1% in static condition with any power factor and with speed variation between 5% and +30% with reference to the rated speed.



Windings / Excitation system
Generator stator is wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th …) harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches. MAUX (Standard): The MAUX MeccAlte Auxiliary Winding is a separate winding within the main stators that feeds the regulator. This winding enables to take an overload of 300% forced current (short circuit maintenance) for 20 seconds. This is ideal for motor starting requirements.

Insulation / Impregnation
Insulation is of class H standard. Impregnation is made with premium tropicalised epoxy resins by dipping and dripping. High voltage parts are impregnated by vacuum, so the insulation level is always very good. In the high-power models, the stator windings undergo a second insulation process. Grey protection is applied on the main and exciter stator to give enhanced protection.

Reference standards
Alternator manufactured according to , and complies with , the most common specification such as CEI 2-3, IEC 34-1, EN 60034-1, VDE 0530, BS 4999-5000, CAN/CSA-C22.2 No14-95-No100-95.

www.pramac.com

Genset equipment

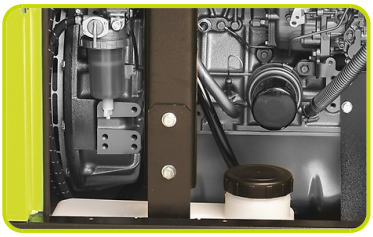
BASE FRAME MADE OF WELDED STEEL PROFILE, COMPLETE WITH:



• Anti-vibration mountings properly sized

• Welded support legs

PLASTIC FUEL TANK WITH THE FOLLOWING COMPONENT:

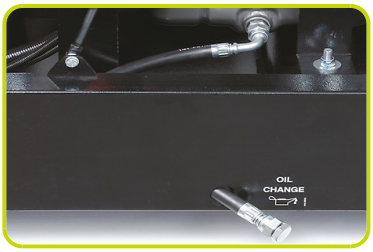


• Filler neck

• Air breather (ventilation pipe)

• Minimum fuel level sensor

OIL DRAININ PIPE WITH CAP:



• Oil draining facilities

ENGINE COMPLETE WITH:

• Battery

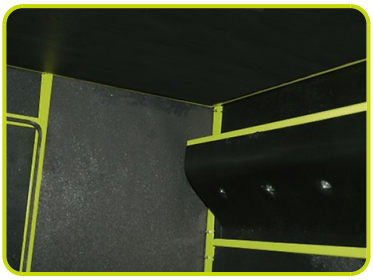
• Liquids (no fuel)

CANOPY:



• Soundproof canopy made up of modular panels, realized with zinced steel as treatment against corrosion and aggressive conditions, properly fixed and sealed allowing a full weatherproof enclosure.
• Easy access to the genset for maintenance purposes thanks to: Wide lateral access doors fixed by stainless steel hinges and provided with plastic lockable handles and internal perforated galvanized steel-sheet; Detachable panels, with screws holes protected by rubber tap.
• Control panel protection door provided with suitable window and lockable handle.
• Lateral air inlet opening properly protected and soundproofed. Exhaust air outlet from the roof, trough wet section protected by proper grid.
• Single detachable lifting eye placed on the roof.

SOUNDPROOF:



• Noise attenuation thanks to soundproofing material

• Efficient residential silencer placed inside the canopy

www.pramac.com

Dimensional data		
Length	(L) mm	2000
Width	(W) mm	920
Height	(H) mm	1310
Dry weight	Kg	945
Fuel tank capacity	l	68
Fuel tank material		Plastic



Autonomy		
Fuel consumption @ 75% PRP	l/h	8.23
Fuel consumption @ 100% PRP	l/h	10.70
Running time @ 75% PRP	h	8.26
Running time @ 100% PRP	h	6.36

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



Installation data		
Total air flow	m³/min	67.90
Exhaust gas flow @ PRP	m³/min	7
Exhaust gas temperature @ LTP	°C	492

Electrical Data		
Battery capacity	Ah	70
MAX current	A	69.28
Circuit breaker	A	63

Control panel availability	
AUTOMATIC CONTROL PANEL	ACP

www.pramac.com

MCP - Manual control panel



Mounted on the genset and complete of: analogue instrumentation, control, protection of the generating set, protected through door with lockable handle.

INSTRUMENTATION (ANALOGUE)

- Voltmeter (1 phase)
- Ammeter (1 phase)
- Hours-counter

COMMANDS

- Start/stop selector switch with key (Glow plugs preheating function also included).
- Emergency stop button installed on canopy side.



PROTECTION WITH ALARM

- Low fuel level
- Battery charger failure
- low oil pressure
- high engine temperature
- Earth Fault.



PROTECTIONS WITH SHUTDOWN

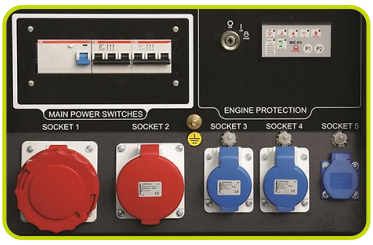
- Low fuel level
- Battery charger failure
- low oil pressure
- high engine temperature.
- Circuit breaker protection: III poles
- Emergency stop button



OTHERS

- Panel protected through door with lockable handle.

OUT PUT PANEL MCP



Power cables connection to Circuit Breaker.		
Socket kit		Standard
Thermal protections		
3P+N+T 400V 63A	n	1
3P+N+T CEE 400V 32A	n	1
2P+T CEE 230V 16A	n	2
230V 16A SCHUKO	n	1

www.pramac.com

MPF - Manual control panel full option

Mounted on the genset and complete of: analogue instrumentation, control, protection of the generating set, protected through door with lockable handle



INSTRUMENTATION (ANALOGUE)

- Voltmeter with selector switch (3 phases)
- Frequency meter
- Ammeter with selector switch (3 phases)
- Hours-counter
- Fuel level indicator
- Oil pressure indicator
- Engine temperature indicator

COMMANDS

- Start/stop selector switch with key
- Emergency stop button



PROTECTION WITH ALARM

- Low fuel level
- Battery charger failure
- low oil pressure
- high engine temperature
- Earth Fault



PROTECTIONS WITH SHUTDOWN

- Low fuel level
- Battery charger failure
- low oil pressure
- high engine temperature
- Circuit breaker protection: III poles
- Emergency stop button

OTHERS PROTECTIONS

- Panel protected through door with lockable handle

OUT PUT PANEL MPF



ETB- External Terminal Board		ETB
Socket kit		Standard
Individual CB and Earth Fault protection		√
3P+N+T 400V 63A IP67	n	1
3P+N+T CEE 400V 16A IP67	n	1
230V/16A 2P+T CEE IP67	n	1
230V 16A SCHUKO IP68	n	1

www.pramac.com

ACP - Automatic control panel

Mounted on the genset, complete with digital 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 - kVAr).
- Power factor Cos φ.
- Hours-counter.
- Engine speed r.p.m.
- Fuel level (%).
- Engine temperature (depending on model)



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.
- DC system disconnection switch.
- Acoustic alarm.
- Automatic battery charger.
- RS232 Communication port.
- Settable PASSWORD 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.
- Circuit breaker protection: III poles.
- Earth Fault included in the control unit.



OTHERS PROTECTIONS

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

OUT PUT PANEL ACP

3P+N+T 400V 63A	n	1
Predisposed for remote control optional:		RCG
Socket kit		Optional



www.pramac.com

Supplements:	
To be ordered with the equipment	:

CONTROL PANEL SUPPLEMENT

RCG - Various supplements for remote controls - available for models:	ACP
TLP - Various supplements for remote signals - available for models:	ACP
ADI - Adjustable Differential Intensity - available only for models:	ACP
TIF - IV Poles Circuit Breaker instead of III - available for models:	ACP MCP
ETB - External Terminal Board - available for models:	MCP ACP



Socket kit

SKB socket kit B - available for models:		ACP MCP
Individual CB and Earth Fault protection		√
3P+N+T 400V 63A IP67	n	1
230V/16A 2P+T CEE IP67	n	1
230V 16A SCHUKO IP68	n	1
3P+N+T CEE 400V 16A IP67	n	1

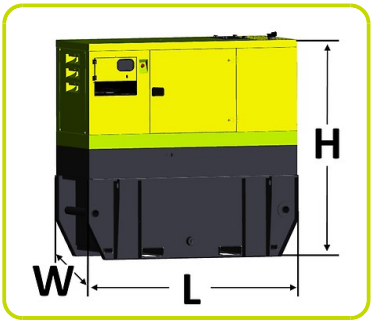


GENSET EQUIPMENT

KPR - Premium Kit (Leak Proof Tray - Leakage detection sensor - Manual oil drain pump)	
AFP - Automatic Fuel Pump	ACP
KRT - Kit Rental which includes fuel filter with water separator, 3-way fuel valve, battery switch, earth rod, docs folder)	

Extended Fuel Tank

Fuel tank capacity	l	450
Length (Genset)	(L) mm	2005
Width (Genset)	(W) mm	1066
Height (Genset)	(H) mm	1812



ENGINE SUPPLEMENTS

PHS - Coolant Pre-Heating System - available for models:	ACP

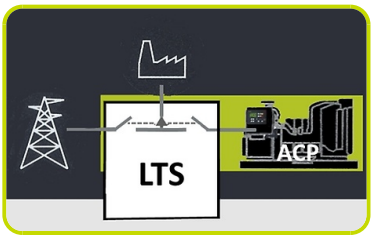
www.pramac.com

Accessories	
Items available as accessory equipment	
STR - Site trailer	•
RTR - Road Trailer	•



LTS - Load Transfer Switch [Accessories for ACP Automatic Control Panel]

The Load Transfer Switch (LTS) panel operates the power supply changeover between the generator and the Mains in backup applications, guarantying the feeding to the load within a short period of time.
It consists of a standalone cabinet which can be installed separate from the generating set. The logic control of the power supply changeover is operated by means of the Automatic Control Panel (ACP) mounted on the generating set, so therefore none logic device is required on the LTS panel.



LTS Type ATyS_dM:
- Box type: steel enclosures
- Installation mode: Wall mounted
- Door: Hinged door closed with double barb locking.
- Ingress Protection: IP54
- Gland Plates: Removable on the top & bottom side
- Connections: Bottom/Bottom
- Motor unit
- Switch position indicator
- Auto/Manual cover selector
- Housing for manual handle
- Padlocking mechanism
- Two side by side mounted load break switches
- Poles 4
- Double coils self-powered
- Voltage (coils): 230/240VAC (Tollerance+/-20% 176/288VAC)
- Frequency 50 & 60HZ
- *Compliant with IEC 60947-3, EN 61439-6-1 and GB 14048-11*



SUPPLEMENTS AVAILABLE ON REQUEST (Only for LTS Version ATyS_dM):
- ***ESB -*** *Emergency Stop Button (installed on the panel front)*
- ***APP*** *- Additional IPXXB Protection (internal plexiglass)*

www.pramac.com

The information is aligned with the Data file at the time of download. Printed on 16/10/2020 (ID 3885)

©2019 | PR INDUSTRIAL s.r.l. | All rights reserved | Image shown may not reflect actual package. Specifications subject to change without notice