PRAMAC

Solutions for

TELECOM APPLICATIONS

Pramac

Power solutions

Pramac offers a wide range of products for Telecom applications.
In order to get the best power solution, there are two main factors that the operators need to consider:

- The type of site application
- The electric input accepted by the BTS › Base Transceiver Station

SITE APPLICATION

Application types can be further split according to the quality of the mains power supply present into the sites, and they are commonly defined as:

ON GRID

- reliable grid site application › sites which receive regular electricity supply, and where power outages are rare.

BAD GRID

- bad grid site application › sites in which the grid power is available only for a limited period of time.

OFF GRID

- no grid site application › sites which have no mains power provision, usually located in remote areas.

GENSET ELECTRIC OUTPUT

Different electric input are accepted by the BTS. It depends on the country they are located in, and / or on the technology of their infrastructures.

BTS can accept different electric input supplies:

- AC › alternating current
- DC › direct current
- Both when different devices are installed

The BTS have been moving more and more to DC input power sources.

		DIESEL GENSETS	HYBRID SYSTEMS
SITE APPLICATION	**ON GRID** Reliable grid	✓	-
	BAD GRID Unreliable grid	✓	✓
	OFF GRID Zero grid	✓	✓
GENSET ELECTRIC OUTPUT	**AC**	✓	-
	DC	✓	✓
	AC& DC	-	✓

Diesel Gensets

SITE APPLICATION
ON GRID · BAD GRID · OFF GRID

ELECTRIC OUTPUT
AC · DC

FLEXIBILITY AT ANY TIME

A long experience in supplying the telecom markets has enabled Pramac to design and develop a bespoke range of power generators which incorporate a number of unique features specific to the telecoms sector.

The main models of the Pramac offer, under the GTW Series, featuring long-running and super silent characteristics, represent today the core design to respond to the telecom application's power needs.

The GTW Series presents a wide range of power solutions from 10kVA up to 70 kVA.

MORE THAN 25.000 UNITS
sold worldwide

Specifications

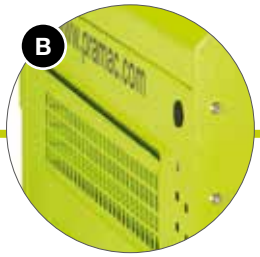
- AC single or three phases, 50Hz or 60Hz
- DC fix or variable speed
- Water cooling
- Anti-theft hinges and screws
- Metal fuel tank
- Weatherproof enclosure
- Double large doors, on each side, for easy service and maintenance
- Automatic control panel
- Fully modular design for Telecom applications

Advantages

- Affordable investment: low CAPEX solution
- Easy transportation by truck or pick-up
- Retrofit super silent enclosure up to 65 dB(A) @1m
- Several metal fuel tank capacities: from 80 litres up to 2000 litres
- Longer maintenance intervals with 1000hr kit free maintenance on selected models

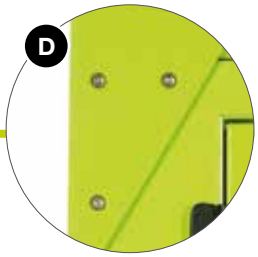
Product
Properties and features

Four removable lifting points for easy handling

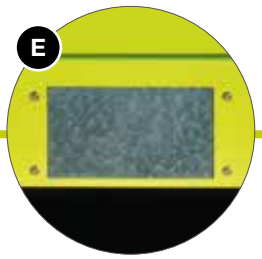


Weatherproof galvanized sheet metal enclosure

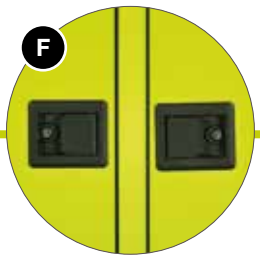
Large double doors on each side for an easy maintenance & service



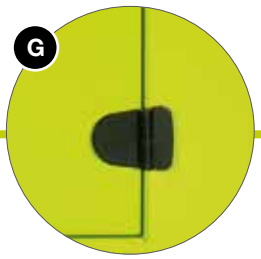
Anti-theft screws



Easy access for power cable



Lockable doors with key or padlock



Anti-theft hinges

Metal fuel tank with internal or external fuel refilling point

LONG RUNNING

1000 HR
FREE
MAINTENANCE

Large autonomy
In remote areas

Long Running models have been designed to increase running time, allowing to reduce refuelling frequency.
Combined with the long maintenance optional, on site visits for servicing and refuelling can be reduced, with operating cost saving up to 50%.
The modular designs allow transporting the genset & the extended fuel tank separately and assembled on site. Extended metal fuel tank available single and double wall, from 200 up to 2000 litre capacity.

SUPER SILENT

LOW NOISE
65 dB(A)
@1m

Low noise
Near city centers

The Super Silent range is specifically designed for urban areas where low noise emissions are required:

- Additional noise attenuators improving air inlet/ outlet soundproofing and performances
- Super silent modules can be transported and installed on site

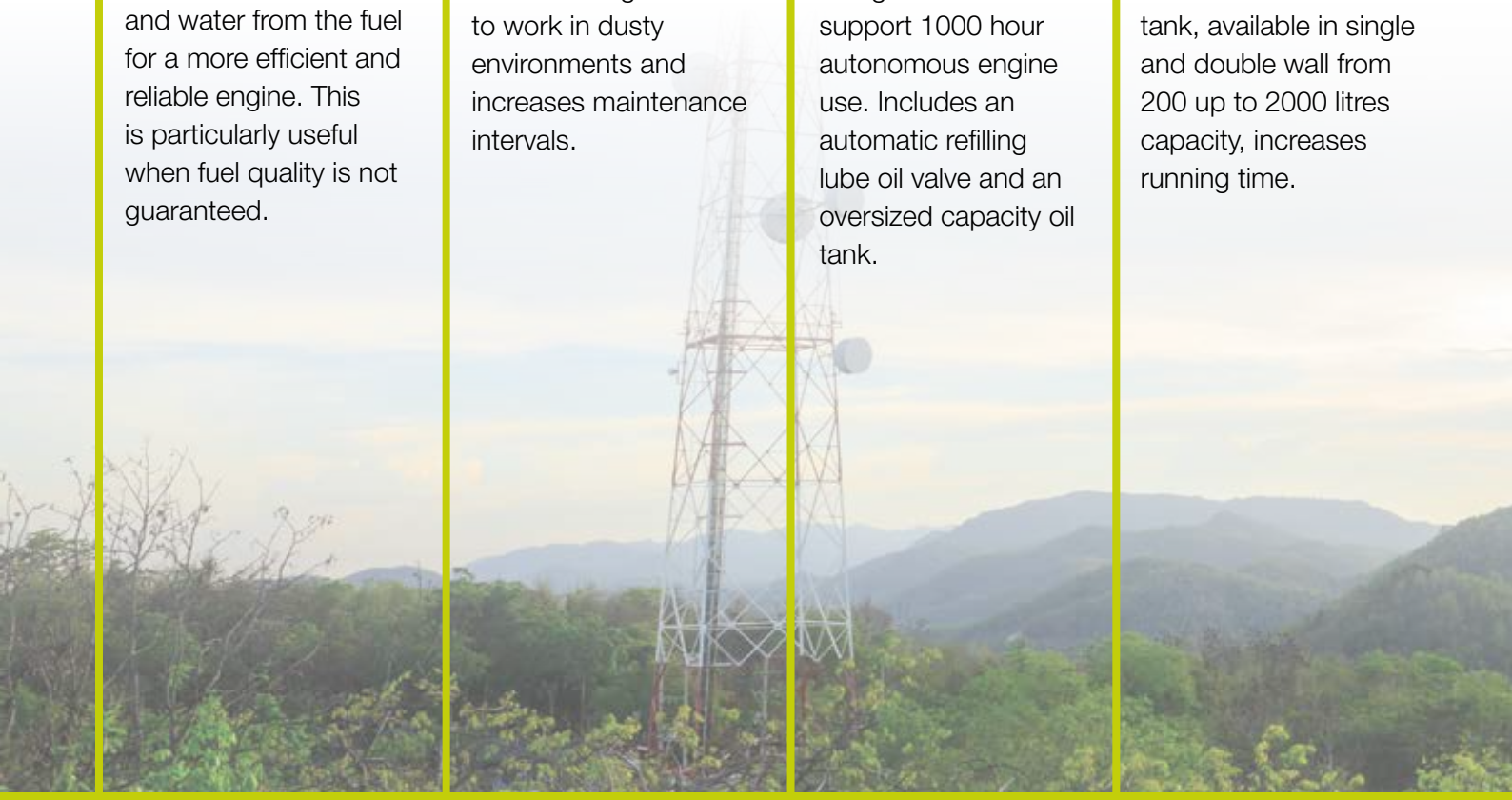
Long running
Optional

WSP
WATER SEPARATOR FILTER
Removes particulates and water from the fuel for a more efficient and reliable engine. This is particularly useful when fuel quality is not guaranteed.

HDF
HEAVY-DUTY FILTER
Enables the genset to work in dusty environments and increases maintenance intervals.

ALS
AUTOMATIC LUBE OIL SYSTEM
Designed to support 1000 hour autonomous engine use. Includes an automatic refilling lube oil valve and an oversized capacity oil tank.

EFT
EXTENDED FUEL TANK
Extended metal fuel tank, available in single and double wall from 200 up to 2000 litres capacity, increases running time.



Control & protection
Optional

TSW
TRANSFER SWITCH
Transfer Switch integrated inside the genset control panel for easy grid connection.

LCL
LOW COOLANT LEVEL SENSOR
Low coolant level sensor with alarm and shut down to prevent engine damage and overheating.

RGW
REMOTE GATEWAY
For remote monitoring and control of the genset using GPRS and GSM modules. GPS functionality available.

DSW
DOOR SWITCHES
Audible alarm when genset doors are opened.

WEB REMOTE MONITORING
Remote genset fleet control with monitoring software with event log and automatic system alerts.

EAG/FAG
ENGINE AND FUEL ANALOG GAUGE
For quick monitoring of running generator parameters.

Other anti-theft systems and configurations available.

Hybrid Systems

SITE APPLICATION: BAD GRID, OFF GRID

ELECTRIC OUTPUT: AC, DC

HIGH PERFORMANCE
BEST TOTAL COST OF OWNERSHIP

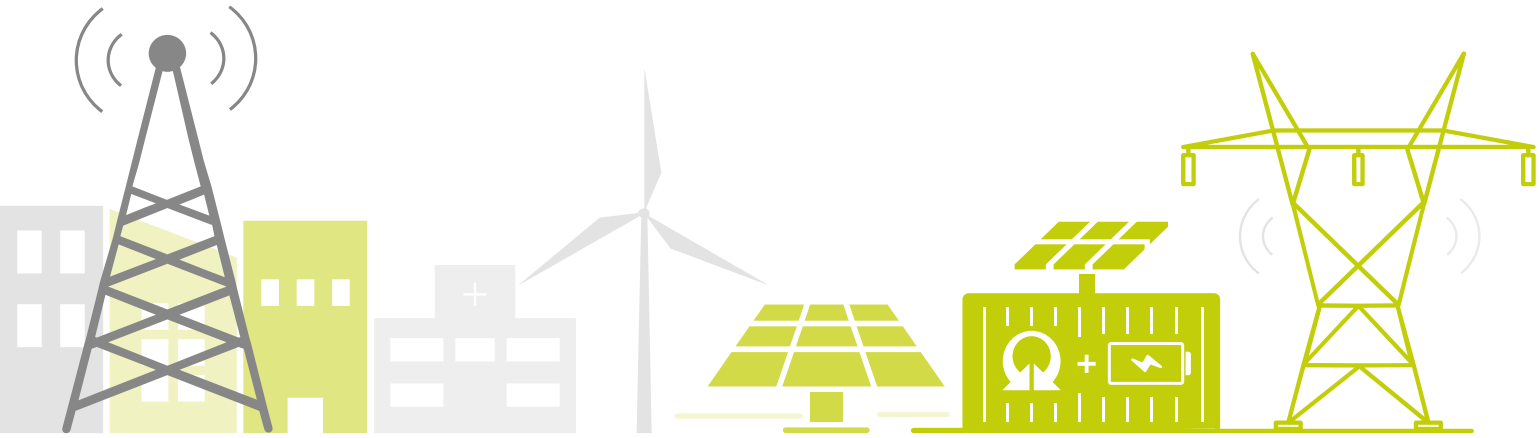
Hybrid systems are designed to power telecom sites at very low opex.

In off grid application, the OPEX reduction can reach -70% with an increase of system lifetime up to + 7,5 years.

Pramac has a range of power options available to suit all types of applications, through engine and battery pack sizing from 300Ah up to 1400Ah, suitable for average loads from 500W up to 5kW.
Under certain conditions, the system can support peak load of above 5kW, still maintaining a good efficiency in terms of cost-effectiveness.

The hybrid box is the core of the hybrid system and gives the flexibility of adding renewable power sources to the system at any time.

EMPOWER TELECOM SITES AT VERY LOW OPEX



Product Properties and features

- Compact dimensions & easy transportation
- Low fuel consumption
- Longer maintenance interval with 1000hr kit free maintenance
- Plug-in installation
- Remote Monitoring
- From -30% up to -70% OPEX reduction*
- From -50% up to -88% engine running time reduction*

* Compare with Dual AC genset 24h/7d off grid installation

COMPACT

- DC variable speed output from 44 to 57 Vdc genset
- VRLA battery pack available from 300Ah up to 1400Ah
- Anti-theft hinges and screws
- Metal fuel tank
- Weatherproof enclosure
- Double large doors, on each side, for easy service and maintenance
- Hybrid box managing the power flow among the genset, the batteries and the PV panels (Option)
- Modular design

Advantages

- Easy transportation by truck or pick-up
- Longer maintenance interval with 1000hr kit free maintenance
- Plug-in installation

ALL IN ONE

- DC variable speed output from 44 to 57 Vdc genset
- VRLA battery pack available from 300Ah up to 1100Ah
- Metal fuel tank
- Integrated photovoltaic panel

Advantages

- Complete hybrid system which combines DC diesel generator, VRLA Batteries and photovoltaic panels providing OPEX reduction and longer lifecycle
- Long run-time, integrated double walled metal fuel tank with 800 liters capacity
- Customizable power options available to meet the needs of every installation

Distributed by

PRAMAC

WE ARE THE ENERGY GENERATION!

EN/01_2023_rev.2