

Model: IDR-044 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

RENTAL Genset with manual control panel.



Image for guidance purposes.



PRP

CONTINUOUS POWER: 40 kVA

PRP "Prime Power" norma ISO 8528-1

LTP

STAND-BY POWER: 42 kVA

LTP "Limited Time Power" norma ISO 8528-1

ENGINE

| MAKE | MODEL |
|-------|----------|
| DEUTZ | BF4M2011 |

ALTERNATOR

| MAKE | MODEL |
|-------------|----------|
| LEROY-SOMER | TAL042-E |

| VOLTAGE | HZ | PHASE | COS Ø | PRP kVA/kW | LTP kVA/kW | AMP. (LTP) |
|---------|------|-------|-------|------------|------------|------------|
| 400/230 | 50Hz | 3 | 0,8 | 40,0/32,0 | 42,2/33,8 | 60,91 |

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ENGINE CHARACTERISTICS



| MAKE | MODEL |
|-------|----------|
| DEUTZ | BF4M2011 |

General Data

| | |
|--------------------------|------------|
| Power PRP (kWm) | 36.4 |
| Power LTP (kWm) | 38.2 |
| No. cylinders | 4 |
| Cylinder capacity (L) | 3.1 |
| Diameter per stroke (mm) | 94 x 112 |
| Compression ratio | 18.1 |
| Cooling system | OIL |
| Injection | DIRECT |
| Suction | TURBO |
| Series regulator | MECHANICAL |
| Fly wheel coupling | 3 - 11.5 |

Lubrication system

| | |
|-------------------------------|-----|
| Oil capacity (L) | 10 |
| Oil consumption (%) | 0.5 |
| Min. alarm oil pressure (bar) | 1.5 |

Ventilation system

| | |
|---|------|
| Air cooling flow (m ³ /h) | 2370 |
| Combustion air flow (m ³ /h) | 168 |
| Max. back pressure for fan (mbar) | |

Exhaust system

| | |
|--------------------------------------|-----|
| Exhaust gas flow (m ³ /h) | 468 |
| Exhaust back pressure (mbar) | 30 |
| Temp. exhaust gases (°C) | 611 |

Electrical system

| | |
|----------------------|-----|
| VDC (V) | 12 |
| Battery (Ah) | 90 |
| Engine start-up (kW) | 2.6 |

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ALTERNATOR CHARACTERISTICS

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|-------------|----------|
| LEROY-SOMER | TAL042-E |

General Data

| | |
|-----------------------|------------|
| Power PRP (kVA) | 40 |
| Power LTP (kVA) | 45 |
| Efficiency Alt. 3/4 % | 88.9 |
| Efficiency Alt. 4/4 % | 88.4 |
| No. Poles | 4 |
| Voltage regulator | AREP+ R180 |
| No. wires | 6 |
| Insulation | H |
| Xd (%) | 281 |
| X'd (%) | 14.8 |
| X | 7.4 |
| Degree of protection | IP23 |

GENERATOR SET CONSUMPTION

| % POWER USED | LITRES/HOUR |
|--------------|-------------|
| 50% | 5.6 |
| 75% | 8.4 |
| 100% | 11.6 |

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT

| Dimensions (mm) | | |
|-----------------|-------|--------|
| LENGTH | WIDTH | HEIGHT |
| 2540 | 1140 | 1647 |

| FUEL TANK (LITRES) | WEIGHT (KG) |
|--------------------|-------------|
| 250 | 1440 |

| NOISE LEVEL (dB (A)) |
|----------------------|
| 64+/-2dB(A)@7m |

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INMESOL GENERATOR SET

GENERAL DESCRIPTION

The “INMESOL” generator set is an electrical energy generating machine which is used in places where there is **no mains supply** or when there is a MAINS failure.

The mobile elements, distribution belt, fan, etc., and those parts which reach high temperatures during operation, exhaust manifold, etc, include their corresponding protections, in compliance with the requirements of the Machinery Directive **2006/42**.

**INMESOL, S.L.U. company with ISO 9001 quality certification system for the:
Design, manufacture, marketing and technical assistance of power GENSETS
and lighting towers.**

Europe regulations:

Inmesol power GENSET sets comply with European legislation and were given the CE marking which includes the following directives:

- 2006/42/EC on machinery safety.
- Only in GENSETs in soundproof canopies - 2005/88/EC on NOISE EMISSIONS by equipment for outdoor use (amends the 2000/14/EC).
- 2014/30/UE on Electromagnetic Compatibility.
- 2014/35/UE on electrical safety, electrical equipment designed to be used within certain voltage limits

International regulations:

Upon request, INMESOL can supply equipment that complies with the International Legislation and Regulations:

- “Technical Regulation on Safety of Machinery & Equipment” No. 753, repealing GOST R standards for exports to Russia.
- Resolution nº 90708 dated August 30th 2013 “Reglamento Técnico de Instalaciones Eléctricas RETIE” issued by the Ministry of Mining and Energy, Section 20.21 Engines and power generators, for exports to Colombia.

Information:

The power ratings are for reference to environmental conditions: barometric pressure 100 kPa, 25°C and 30% relative humidity. These are defined by ISO 8528 and ISO 3046.

PrimePower (PRP) “Main Service” is applicable for power GENSETs that function as main electric power source. It may be overloaded by 10% in limited time points, maximum once every 12 hours.

StandbyPower (LTP) “Emergency Service” applies to power GENSETs that run during Electrical Grid failure. This power may NOT BE OVERLOADED.

Nevertheless, to obtain long engine life, it is recommended that the active power average load (kW) connected to the power GENSET set in any period of 24 hours of operation does not exceed the following values:

- In Main Service 70% of the PRP power.
- In Emergency Service during Electrical Grid failure 80% of the LTP power.

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RR RENTAL
RANGE

Scope of supply

GENSET WITH CONTROL PANEL FOR MANUAL START OR START BY EXTERNAL SIGNAL.



SOUNDPROOF

Engine/alternator monoblock directly connected and installed via anti vibration mounts on a base frame made from high tensile electro welded steel profiles that are treated with degreasing liquids and aplicated with a phosphate coat and polyester (QUALICOAT) paint.

Canopy of steel sheet sound proofed with fireproof rockwool, and treated with degreasing liquids and aplicated with a phosphate coat and polyester (QUALICOAT) paint.

Sealed base frame.

Integrated metal fuel tank of 24 hours autonomy with liquid leakage protection.

Large fuel tank register for cleaning.

Fuel draining plug.

Engine with mechanical driven pusher fan.

Residential exhaust silencer with -35 dB(A) attenuation, plus industrial silencer in line, with exhaust pipe and protection cap.

Integrated lifting hook for single point lifting with crane, up to canopy 4.2m long.

Fork lift pockets for easy lifting from the bottom.

Hook for towing.

Radiator water filling cover register.

Easy acces to radiator cleaning and replacement.

Security protection for hot and moving parts as well as live electrical components.

Manual oil sump pump.

Base frame prepared for trailer kit installation.

External emergency stop push button.

Heavy-duty engine starting battery complete with wires connection, terminal protection and disconnect switch.

Battery charge alternator.

Self excited and auto regulated alternator.

Electric control cubicle with protection and control unit with remote start function.

4 poles circuit breaker and adjustable earth leakage relay, type A.

Ground terminal (earth rod not included).

Documents case.

Door retainers.

Cables lock for fixing the power cables.

Heavy-duty anti vibration mounts fitted between the alternator/ engine block and the frame, for enhanced of vibrations and mechanical shocks during transport.

Step/s for making easier the access to the lifting hook.

OPTIONS

Electric engine coolant preheating.

Static battery charger.

Automatic/manual fuel transfer pump.

Alternator with enhanced protection against harsh environments.

Diferent colour.

3 & 6-ways valves kit for external fuel tank connection.

Quick connectors kit for external fuel tank connection.

ATS panel to convert a manual genset into a mains failure one.

Voltage and frequency selector switch (depending on models).

Sockets kit integrated in the canopy.

Internal lighting.

External fuel filler cap with security locable key.

Synchronising control panels, for paralleling in island mode or with the mains.

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DSE 6110 MKIII MANUAL CONTROL PANEL

MANUAL CONTROL, PROTECTION AND DISTRIBUTION panel, assembled on the generator set in metal cabinet with a DSE 6110 MKIII controller.



Image for guidance purposes.

It has the following:

1. ON/OFF KEY & EMERGENCY STOP PUSH BUTTON

2. PROTECTIONS

Main circuit breaker.

Earth leakage protection.

Protection fuses for control unit.

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DSE 6110 MKIII MANUAL CONTROL PANEL

3. DSE 6110 MKIII CONTROL UNIT

LCD SCREEN:

It has a digital LCD screen, which provides easy reading of the information regarding the ENGINE, ALTERNATOR and LOAD.

| ENGINE | ALTERNATOR AND LOAD |
|----------------------------|---|
| Coolant temperature. * | Phase to phase and phase to neutral voltages. |
| Oil pressure. * | Currents. |
| Running speed (rpm). | Frequency. |
| Fuel level. | Active power (kW). |
| Battery voltage. | Reactive power (kVAr). |
| Charge alternator voltage. | Apparent power (kVA). |
| Running hours. | Power factor (cos ϕ). |
| Number of starts. | Active energy meter (kW-h). |

* In generating sets equipped with the corresponding sensor.

CONTROL OF THE SET:

STARTS AND STOPS the set MANUALLY.

Possibility of doing it AUTOMATICALLY via REMOTE START SIGNAL.

PROTECTION OF THE ENGINE AND ALTERNATOR, WITH THE ALARMS ACTIVATED:

| ENGINE | ALTERNATOR |
|------------------------------|---------------------------------|
| Low oil pressure. | Low and high voltage. |
| High coolant temperature. | Low and high frequency. |
| Low and high battery voltage | Overload due to current (A). |
| Charge alternator failure. | Overload due to power (kW-kVA). |
| Low fuel level. | Short-circuit. |
| Low load. | Negative phase sequence. |

OTHER CHARACTERISTICS:

| | |
|--|--|
| Fully configurable via PC software. | Programmer clock for the optimal maintenance of the set. |
| Extensive number of configurable inputs and outputs. | PLC functionality. |
| Configurable alarms and timers. | Expandable functionalities with additional devices. |
| USB connectivity. | Possibility of remote control with additional devices. |
| Real-time clock for an accurate record of events. | |

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DSE 6110 MKIII MANUAL CONTROL PANEL

4. PROTECTIONS

| MAIN CIRCUIT BREAKER | EARTH LEAKAGE PROTECTION | DISTRIBUTION |
|----------------------|--------------------------|-----------------|
| 63A, 4P | Modular 63A, 30mA | Power terminals |