

Model: ID-022 - STAND-BY RANGE

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

Automatic with amf/ats panel Stand-by Genset V2.



Image for guidance purposes.

## PRP

**CONTINUOUS POWER:** 20 kVA

PRP "Prime Power" norma ISO 8528-1

## LTP

**STAND-BY POWER:** 22 kVA

LTP "Limited Time Power" norma ISO 8528-1

## ENGINE

MAKE	MODEL
DEUTZ	F3M 2011

## ALTERNATOR

MAKE	MODEL
MECC-ALTE	ECP 28-M/4

VOLTAGE	HZ	PHASE	COS Ø	PRP kVA/kW	LTP kVA/kW	AMP. (LTP)
400/230	50	3	0,8	20,0/16,0	22,0/17,6	31,79

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## ENGINE CHARACTERISTICS

MAKE	MODEL
DEUTZ	F3M 2011

### General Data

Power PRP (kWm)	20.00
Power LTP (kWm)	21.00
No. cylinders	3
Cylinder capacity (L)	2.30
Diameter per stroke (mm)	94 x 112
Compression ratio	19
Cooling system	OIL
Injection	DIRECT
Suction	NATURAL
Series regulator	-
Fly wheel coupling	3 - 11,5

### Lubrication system

Oil capacity (L)	5.50
Oil consumption (%)	0.30
Min. alarm oil pressure (bar)	1.50

### Ventilation system

Air cooling flow (m <sup>3</sup> /h)	1800
Combustion air flow (m <sup>3</sup> /h)	86.00
Max. back pressure for fan (mbar)	0

### Exhaust system

Exhaust gas flow (m <sup>3</sup> /h)	236
Exhaust back pressure (mbar)	30
Temp. exhaust gases (°C)	611

### Electrical system

VDC (V)	12
Battery (Ah)	60
Engine start-up (kW)	3

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## ALTERNATOR CHARACTERISTICS

MAKE	MODEL
MECC-ALTE	ECP 28-M/4

### General Data

Power PRP (kVA)	20.00
Power LTP (kVA)	22.00
Efficiency Alt. 3/4 %	88.00
Efficiency Alt. 4/4 %	87.60
No. Poles	4
Voltage regulator	DSR
No. wires	12
Insulation	H
Xd (%)	175.00
X'd (%)	16.50
X	9.40
Degree of protection	IP23

## GENERATOR SET CONSUMPTION

% POWER USED	LITRES/HOUR
50%	2.91
75%	4.15
100%	5.76

## DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT

Dimensions (mm)		
LENGTH	WIDTH	HEIGHT

2000                      950                      1253

FUEL TANK (LITRES)	WEIGHT (KG)
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85    875

NOISE LEVEL (dB (A))
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60 dB (A) @ 7 m

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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 company with ISO 9001 quality certification system for the:**

Design, manufacture, marketing and technical assistance of power GENSETS, lighting towers, welding GENSETS, tractor with PTO GENSET and hybrid generation systems.

### 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.
- 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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**SB** **STAND-BY**  
RANGE

**Scope of supply**

**V2 GENSET WITH AMF CONTROL PANEL WITH TRANSFER SWITCH.**



Engine/alternator monobloc directly connected and installed via silent blocks on a frame made from high tensile electro welded steel profiles that are treated with degreasing liquids and applied with a phosphate coat and Polyester (QUALICOAT) paint.
Canopy of steel sheet sound proofed with fireproof rockwool, and treated with degreasing liquids and applied with a phosphate coat and Polyester (QUALICOAT) paint.
Sealed chassis
Fuel tank integrated in the chassis provided with fuel level gauge and fuel lines to the engine.
Engine with mechanical engine driven pusher fan.
Residential silencer with -35 db(a) noise reduction with exhaust tube and protection cap.
Thermal and magnetic circuit breaker
Battery charge alternator.
Starter battery complete with cables to the engine and pole protection.
Installation prepared for earthing spike (spike not included).
Security protection for belts and moving parts as well as on electrical component.

External emergency stop push button.
Manual engine oil extraction pump.
Self excited and auto regulated alternator.
Integrated lifting hook for single point lifting with crane, gensets up to 450 kVA (Except in swing-out cover mode)
Base frame prepared for trailer kit
Standard electronic speed governor on engines from 220 kVA and up.
Electric control cubicle with digital control module, automatic mains failure, manual start or remote start on signal with change over switch in the same cabinet.
Battery charger for gen set with 12VCC battery (2A).
Battery charger for gen set with 24VCC battery (5A).
Electric engine coolant preheating on gen sets with automatic mains failure controller.
Horizontal outlet for hot air (till canopy 4200x1600x2245)
Control cable of 6 m

**OPTIONS**

Eearth fault relay
Integral additional socket panel (from 20 kVA till 400 kVA PRP)
Residential silencer

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**DSE 6120 MKIII AUTOMATIC CONTROL PANEL WITH AMF/ATS PANEL**

**V2**

PROTECTION, DISTRIBUTION AND AUTOMATIC CONTROL panel which starts the generator set when it detects a mains failure and stops it when the mains is restored with the control unit DSE 6120 MKIII. It also starts and stops the group manually via a pushbutton or remote start-up by contact. It incorporates change over switch. The entire assembly is in a steel enclosure separated from the gen set.



Image for guidance purposes.

It has the following:

## 1. EMERGENCY STOP PUSHBUTTON

## 2. PROTECTIONS:

Magnetothermal switch (preheating resist.) 2P (16 A)

Protection fuses for control module

## 3. BATTERY CHARGER

**V1** PREWIRED GENSET READY TO INSTALL AMF CONTROL PANEL.

**V2** GENSET WITH AMF CONTROL PANEL WITH TRANSFER SWITCH.

**V3** GENSET WITH AMF CONTROL PANEL WITHOUT TRANSFER SWITCH. READY TO ADD SEPARATED LTS PANEL.

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## 4. DSE 6120 MKIII PROTECTION CONTROL MODULE.

### LCD SCREEN:

It is equipped with a digital LCD screen, which makes it easy to read the information concerning the ENGINE, ALTERNATOR and LOAD available in several languages. The readings that can be obtained are:

ENGINE:	ALTERNATOR AND CHARGE:	MAINS:
Coolant temperature	Voltages between phases and between phases and neutral.	Frequency
Oil pressure	Intensities	Voltages between phases and neutral (L1-N, L2-N, L3-N).
Turning speed (rpm)	Frequency	Voltages between phases and (L1-L2, L2-L3, L1-L3).
Fuel level	Active Power (kW)	Active Power (kW)
Battery voltage	Reactive Power (kVAr)	Reactive Power (kVAr)
Battery alternator voltage.	Apparent Power (kVA)	Apparent Power (kVA)
Operating hours	Cos phi	Cos phi
Number of start-ups	Active energy meter (kW-h)	

### CONTROL OF THE SET:

STARTS and STOPS the set AUTOMATICALLY when mains failure is detected and when it is restored, respectively.

It can also operate MANUALLY a REMOTE STAR.

Breaker control via fascia buttons.

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

ENGINE:	ALTERNATOR:	MAINS:
Low oil pressure	Low and High Voltage	Low and High Voltage
High coolant temperature	Low and High Frequency	Low and High Frequency
Low and High battery Voltage.	Overload due to Intensity (A)	
Failure of the alternator to charge batteries	Power Overload (KW)	
Low fuel level	Low load	

Engine maintenance alarms for fuel filter, air filter and oil filter

### OTHER CHARACTERISTICS:

The real-time clock records the last 100 events.	USB connectivity	ALTERNATIVE CONFIGURATIONS, which open up the working possibilities
"DSE Net" for the connection of expansion modules. The possibilities of adapting the operation of the generator sets to the different current applications are expanded.	Fully configurable via software and PC.	DATA LOGGING. Option to display, either graphically or in editable tables, information on the genset operation.
Extensive number of configurable inputs and outputs.	Communication via USB cable for remote control	Sleep Mode
Configurable alarms and timers.	Programmable clock with multiple maintenance events which can be configured for optimal motor functioning. Weekly and/or monthly programming for up to 8 startups and shutdowns per week.	Option to inhibit start-up by external signal during a specific period.
Internal PLC editor	CAN, MPU & alternator speed sensing (selectable depending on engine type).	Five key menu navigation
Fuel and start outputs configurable when using CAN.	Customisable power up text and images	Backed-up real time clock.
Tier 4 ECO engine support including exhaust fluids & filters		

**V1** PREWIRED GENSET READY TO INSTALL AMF CONTROL PANEL.

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## 5. PROTECTIONS

MAGNETO. PROTECTION (A)	EARTH LEAK PROTECTION	DISTRIBUTION	AMF/ATS PANEL
32A, 4P	Optional	Direct from circuit breaker	30

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