

Model: IV-680 - 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: 620 kVA

PRP "Prime Power" norma ISO 8528-1

LTP

STAND-BY POWER: 680 kVA

LTP "Limited Time Power" norma ISO 8528-1

ENGINE

MAKE	MODEL
VOLVO	TWD 1643 GE

ALTERNATOR

MAKE	MODEL
MECC-ALTE	ECO 40-1.5L/4

VOLTAGE	HZ	PHASE	COS Ø	PRP kVA/kW	LTP kVA/kW	AMP. (LTP)
400/230	50	3	0,8	620,0/496,0	682,0/545,6	985,55

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ENGINE CHARACTERISTICS

MAKE	MODEL
VOLVO	TWD 1643 GE

General Data

Power PRP (kWm)	536
Power LTP (kWm)	596
No. cylinders	6
Cylinder capacity (L)	16.12
Diameter per stroke (mm)	144 x 165
Compression ratio	16.50
Cooling system	LIQUID
Injection	COMMON RAIL
Suction	TURBO-INTERC.
Series regulator	ELECTRONIC
Fly wheel coupling	1-14"

Lubrication system

Oil capacity (L)	48
Oil consumption (%)	0.08
Min. alarm oil pressure (bar)	2.20

Ventilation system

Air cooling flow (m ³ /h)	46800
Combustion air flow (m ³ /h)	2640
Max. back pressure for fan (mbar)	0

Exhaust system

Exhaust gas flow (m ³ /h)	6096
Exhaust back pressure (mbar)	100
Temp. exhaust gases (°C)	450

Electrical system

VDC (V)	24
Battery (Ah)	2 x 180
Engine start-up (kW)	7

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MECC-ALTE	ECO 40-1.5L/4

General Data

Power PRP (kVA)	620
Power LTP (kVA)	682.00
Efficiency Alt. 3/4 %	95.10
Efficiency Alt. 4/4 %	94.90
No. Poles	4
Voltage regulator	DER-1
No. wires	12
Insulation	H
Xd (%)	250.00
X'd (%)	18.40
X	9.80
Degree of protection	IP21

GENERATOR SET CONSUMPTION

% POWER USED	LITRES/HOUR
50%	59
75%	89
100%	120

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT

Dimensions (mm)		
LENGTH	WIDTH	HEIGHT
4860	2060	2630

FUEL TANK (LITRES)	WEIGHT (KG)
1000	6480

NOISE LEVEL (dB (A))
77 @ 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**.

REGULATIONS

The machine holds the “CE” marking, and the corresponding Declaration of Conformity is issued with each of them, in which it specifies that the machine complies with **R.D 842/2002 Low Voltage Regulations and with the European Directives:**

- 2006/42 on Safety in Machinery.
- 2006/95/CE on Electrical Safety.
- 2004/108/CE on Electromagnetic Compatibility.
- 2005/88/CE on NOISE EMISSIONS by equipment for outdoor use (for SOUNDPROOF GENERATOR SETS).

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SB **STAND-BY**
RANGE

Scope of supply

V2 **Gensets WITH AMF/ATS PANEL and 4 Pole Circuit Breaker**

V2



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.	External emergency stop push button.
Canopy of steel sheet sound proofed with fireproof rockwool, and treated with degreasing liquids and applied with a phosphate coat and Polyester (QUALICOAT) paint.	Manual engine oil extraction pump.
Sealed chassis	Self excited and auto regulated alternator.
Fuel tank integrated in the chassis provided with fuel level gauge and fuel lines to the engine.	Integrated lifting hook for single point lifting with crane, gensets up to 450 kVA (Except in swing-out cover mode)
Engine with mechanical engine driven pusher fan.	Base frame prepared for trailer kit
Residential silencer with -35 db(a) noise reduction with exhaust tube and protection cap.	Standard electronic speed governor on engines from 220 kVA and up.
Thermal and magnetic circuit breaker	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 charge alternator.	Battery charger for gen set with 12VCC battery (2A).
Starter battery complete with cables to the engine and pole protection.	Battery charger for gen set with 24VCC battery (5A).
Installation prepared for earthing spike (spike not included).	Electric engine coolant preheating on gen sets with automatic mains failure controller.
Security protection for belts and moving parts as well as on electrical component.	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

V1 PREWIRED VERSION FOR AMF

V2 GENSETS WITH AMF/ATS PANEL AND 4 POLE CIRCUIT BREAKER

V3 GENSET WITH AMF CONTROL PANEL BUT WITHOUT ATS PANEL AND SEPARATED ATS PANEL

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DSE 7320 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 7320. 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

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4. DSE 7320 MKII PROTECTION CONTROL MODULE.

LCD SCREEN:

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

ENGINE:	ALTERNATOR AND CHARGE:	MAINS:
Coolant temperature	Voltages between phases and between phases and neutral.	Frequency
Oil pressure	Intensities	Phase rotation order
Turning speed (rpm)	Frequency	Voltages between phases and neutral (L1-N, L2-N, L3-N).
Fuel level	Active Power (kW)	Voltages between phases and (L1-L2, L2-L3, L1-L3).
Battery voltage	Reactive Power (kVAr)	Earth current
Battery alternator voltage.	Apparent Power (kVA)	
Operating hours	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.

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	Short-circuit	
Low fuel level	Negative Phase Sequence.	
	Power Overload (KW-kVA)	
	Load control:	
	Connection and disconnection of artificial loads.	
	Disconnection of non-essential loads	

OTHER CHARACTERISTICS:

The real-time clock provides an exact record of events.	Fully configurable via software and PC.	Programmer Clock with multiple maintenance events which can be configured for the optimal operation of the engine. Weekly and/or monthly programming of up to 16 starts and stops per week.
Extensive number of configurable inputs and outputs.	Modbus RTU	ALTERNATIVE CONFIGURATIONS, which open up the working possibilities
Configurable alarms and timers.	Possibility of SMS text messages	
USB connectivity	Communications Ethernet, RS 232 and RS 485	

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V2

5. PROTECTIONS

MAGNETO. PROTECTION (A)	EARTH LEAK PROTECTION	DISTRIBUTION	AMF/ATS PANEL
1000A, 4P	Opcional	Direct from circuit breaker	1250

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