

Model: IV-385 - STAND-BY RANGE

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

Automatic without ats panel Stand-by Genset V3.



Image for guidance purposes.

PRP

CONTINUOUS POWER: 350 kVA

PRP "Prime Power" norma ISO 8528-1

LTP

STAND-BY POWER: 390 kVA

LTP "Limited Time Power" norma ISO 8528-1

ENGINE

MAKE	MODEL
VOLVO	TAD 1342 GE

ALTERNATOR

MAKE	MODEL
STAMFORD	HCI444E

VOLTAGE	HZ	PHASE	COS Ø	PRP kVA/kW	LTP kVA/kW	AMP. (LTP)
400/230	50	3	0,8	350,0/280,0	389,2/311,4	562,42

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ENGINE CHARACTERISTICS

MAKE	MODEL
VOLVO	TAD 1342 GE

General Data

Power PRP (kWm)	303
Power LTP (kWm)	333
No. cylinders	6
Cylinder capacity (L)	12.78
Diameter per stroke (mm)	131 x 158
Compression ratio	18.10
Cooling system	LIQUID
Injection	COMMON RAIL
Suction	TURBO-INTERC.
Series regulator	ELECTRONIC
Fly wheel coupling	1 - 14"

Lubrication system

Oil capacity (L)	36
Oil consumption (%)	0.06
Min. alarm oil pressure (bar)	2.20

Ventilation system

Air cooling flow (m³/h)	24120
Combustion air flow (m³/h)	1476
Max. back pressure for fan (mbar)	0

Exhaust system

Exhaust gas flow (m³/h)	3210
Exhaust back pressure (mbar)	100
Temp. exhaust gases (°C)	395

Electrical system

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

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ALTERNATOR CHARACTERISTICS

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STAMFORD	HCI444E

General Data

Power PRP (kVA)	350
Power LTP (kVA)	400.00
Efficiency Alt. 3/4 %	94.40
Efficiency Alt. 4/4 %	93.50
No. Poles	4
Voltage regulator	AS440
No. wires	12
Insulation	H
Xd (%)	2.71
X'd (%)	0.18
X	0.13
Degree of protection	IP23

GENERATOR SET CONSUMPTION

% POWER USED	LITRES/HOUR
50%	37
75%	53
100%	68

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT

Dimensions (mm)		
LENGTH	WIDTH	HEIGHT
4200	1600	2245

FUEL TANK (LITRES)	WEIGHT (KG)
534	-

NOISE LEVEL (dB (A))
72 @ 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 management system certificate and ISO 14001 Environmental Management System Certificate 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
- 2002/88/EC and 2004/26/EC amending the 97/68 on the emission of gases and pollutant particles from internal combustion engines that are installed in non-road mobile machinery.

International regulations:

It also complies with 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

**V3 GENSET WITH AMF CONTROL PANEL WHITOUT TRANSFER SWITCH.
READY TO ADD SEPARATED LTS PANEL.**



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 model)

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.

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)

OPTIONS

Earth fault relay

LTS Panel in metal cabinet

Integral additional socket panel (from 20 kVA till 400 kVA PRP)

Residential silencer

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DSE 7320 MKII AUTOMATIC CONTROL PANEL WITHOUT AMF/ATS PANEL

V3

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 MKII.



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.
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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.

Dual Mutual Standby

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	Enhanced PLC functionality.
USB connectivity	Ethernet communication and simultaneous use of RS232 and RS 485 ports	Data logging function
		The fuel consumption may be monitored on the screen and SMS messages with alarms and reports may be sent.

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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V3

5. PROTECTIONS

MAGNETO. PROTECTION (A)	EARTH LEAK PROTECTION	DISTRIBUTION
630A, 4P	Opcional	Direct from circuit breaker

OPTION:

**4-Pole Switchboard in metal cabinet
independent from the Automatic Panel**

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