

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

TECHNICAL SPECIFICATIONS

Model:

IP-330

Stand-by automatic gen set.



Image for guidance purposes.

ENGINE	MAKE	MODEL
	PERKINS	1606A-E93TAG 5
ALTERNATOR	MODEL	
	MECC-ALTE ECO 38-2LN	

(400 / 230 V)

CONTINUOUS POWER:
(PRP "Prime Power" norma ISO 8528-1) **300 kVA**

STAND-BY POWER:
(LTP "Limited Time Power" norma ISO 8528-1) **330 kVA**

Amperes in the different voltages:

VOLTAGE	HZ	PHASE	COS Ø	PRP KVA/KW	LTP KVA/KW	AMPERAGE
415/240	50	3	0,8	300,0/240,0	330,0/264,0	459,64
400/230	50	3	0,8	300,0/240,0	330,0/264,0	476,88
380/220	50	3	0,8	300,0/240,0	330,0/264,0	501,98
240/139	50	3	0,8	300,0/240,0	330,0/264,0	794,8
230/133	50	3	0,8	300,0/240,0	330,0/264,0	829,35
220/127	50	3	0,8	300,0/240,0	330,0/264,0	867,05

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

ENGINE CHARACTERISTICS

MAKE	MODEL
PERKINS	1606A-E93TAG5

GENERAL DATA

Power PRP (kWm)	261.00
Power LTP (kWm)	287.00
No. cylinders	6
Cylinder capacity (L)	9.30
Diameter per stroke (mm)	116,6 x 146
Compression ratio	17.20
Cooling system	LIQUID
Injection	DIRECT
Suction	TURBO
Series regulator	ELECTRONIC
Fly wheel coupling	1-14"

Lubrication system

Oil capacity (L)	36.00
Oil consumption (%)	0.10
Min. alarm oil pressure (bar)	-

Ventilation system

Air cooling flow (m3/h)	2192400
Combustion air flow (m3/h)	1296.00
Max. back pressure for fan (mbar)	62

Exhaust system

Exhaust gas flow (m3/h)	1368
Exhaust back pressure (mbar)	100
Temp. exhaust gases (°C)	410

Electrical system

VDC (V)	24
Battery (Ah)	2 x 180
Engine start-up (kW)	6



INMESOL, S.L.

Ctra. de Fuente Álamo, 2 · 30153 CORVERA - Murcia · SPAIN



ESPAÑA

Teléfono: +34 968 380 129

Fax: +34 968 380 504

E-mail: ventas@inmesol.com

INTERNATIONAL

Phone: +34 968 380 879

Fax: +34 968 380 400

E-mail: sales@inmesol.com

www.inmesol.com

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

ALTERNATOR CHARACTERISTICS

MODEL

MECC-ALTE ECO 38-2LN (400 / 230 V)

GENERAL DATA

Power PRP (kVA)	300
Power LTP (kVA)	330
Efficiency Alt. 3/4 %	94
Efficiency Alt. 4/4 %	93.70
No. Poles	4
Voltage regulator	DSR
No. wires	12
Insulation	H
Xd (%)	208
X'd (%)	14.00
X	7.20
Degree of protection	IP21

GENERATOR SET CONSUMPTION

% POWER USED	LITRES/HOUR
50%	34.00
75%	47.00
100%	61.00

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT AND NOISE

DIMENSIONS (MM)		
LENGTH	WIDTH	HEIGHT
4200	1600	2120
FUEL TANK (LITRES)		WEIGHT (KG)
534.00		-
NOISE LEVEL (dB (A))		
-		



INMESOL, S.L.

Ctra. de Fuente Álamo, 2 · 30153 CORVERA - Murcia · SPAIN



ESPAÑA

Teléfono: +34 968 380 129

Fax: +34 968 380 504

E-mail: ventas@inmesol.com

INTERNATIONAL

Phone: +34 968 380 879

Fax: +34 968 380 400

E-mail: sales@inmesol.com

www.inmesol.com

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

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).



INMESOL, S.L.

Ctra. de Fuente Álamo, 2 · 30153 CORVERA - Murcia · SPAIN



ESPAÑA

Teléfono: +34 968 380 129

Fax: +34 968 380 504

E-mail: ventas@inmesol.com

INTERNATIONAL

Phone: +34 968 380 879

Fax: +34 968 380 400

E-mail: sales@inmesol.com

www.inmesol.com

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

SB STAND-BY RANGE / SCOPE OF SUPPLY

		
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 epoxy paint.	✓	✓
Canopy of steel sheet sound proofed with fireproof rockwool, and treated with degreasing liquids and applied with a phosphate coat and epoxy paint.	•	✓
Fuel tank integrated in the chassis provided with fuel level gauge and fuel lines to the engine.	✓	✓
Engine with mechanical engine driven pusher fan.	✓	✓
Industrial silencer with -15 db(A) noise reduction and exhaust outlet tube.	✓	•
Residential silencer with -35 db(a) noise reduction with exhaust tube and protection cap.	•	✓
4 Pole 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)	•	✓
4 Lifting points for gen sets from 450 kVA and bigger.	✓	•
Prepared for extended fuel tank, fully bonded for leakage protection.	✓	✓
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	•	✓

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

DSE 7320 AUTOMATIC CONTROL PANEL

DSE 7320 AUTOMATIC CONTROL PANEL

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.



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

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

DSE 7320 AUTOMATIC CONTROL PANEL

- 4 DSE 7320 CONTROL and PROTECTION CENTRE.** It has a digital LCD screen, which provides easy reading of the information regarding the ENGINE, ALTERNATOR, MAINS and CHARGING.

READINGS that can be made:

ENGINE:

- Coolant temperature
- Oil pressure
- Turning speed (rpm)
- Fuel level
- Battery voltage
- Battery alternator voltage.
- Operating hours
- Number of start-ups

ALTERNATOR AND CHARGE:

- Voltages between phases and between phases and neutral.
- Intensities
- Frequency
- Active Power (kW)
- Reactive Power (kVAr)
- Apparent Power (kVA)
- Cos phi
- Active energy meter (kW-h)

MAINS:

- Frequency
- Phase rotation order
- Voltages between phases and neutral (L1-N, L2-N, L3-N).
- Voltages between phases and (L1-L2, L2-L3, L1-L3).
- Earth current

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:

- Low oil pressure
- High coolant temperature
- Low and High battery Voltage.
- Failure of the alternator to charge batteries
- Low fuel level

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

DSE 7320 AUTOMATIC CONTROL PANEL

ALTERNATOR:

- Low and High Voltage
- Low and High Frequency
- Overload due to Intensity (A)
- Short-circuit
- Negative Phase Sequence.
- Power Overload (KW-kVA)
- Load control:
 - 1.Connection and disconnection of artificial loads.
 - 2.Disconnection of non-essential loads

MAINS:

- Low and High Voltage
- Low and High Frequency

OTHER CHARACTERISTICS:

- The real-time clock provides an exact record of events.
- Extensive number of configurable inputs and outputs.
- Configurable alarms and timers.
- USB connectivity
- Fully configurable via software and PC.
- Modbus RTU
- Possibility of SMS text messages
- Communications Ethernet, RS 232 and RS 485
- 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.
- ALTERNATIVE CONFIGURATIONS, which open up the working possibilities

5 DISTRIBUTION:

- Direct output of the magnetothermal switch.

6 OPTIONAL:

- 4-Pole Switchboard installed next to the Automatic Panel
- 4-Pole Switchboard in metal cabinet independent from the Automatic Panel

IP-330 - PERKINS - 1606A-E93TAG5

1.500 R.P.M. | 50 Hz

DSE 7320 AUTOMATIC CONTROL PANEL

The following table shows the different amperages of the magnetothermal switches and the switchboards according to the set's power - Three-phase generators (single phase by request):

CONT. POW		MAGNETOTHERMAL PROTECTION IV POLES (A)	SWITCHBOARD IV POLES (A)
SET'S POWER	250 - 275 kVA	400	400
	300 - 430 kVA	630	630
	450 - 500 kVA	800	800
	570 - 650 kVA	1000	1250
	780 - 800 kVA	1250	1250
	915 - 1100 kVA	1600	1650
	1150 - 1300 kVA	2000	2000
	1400 - 1750 kVA	2500	2500
	1800 - 2100 kVA	3200	3200