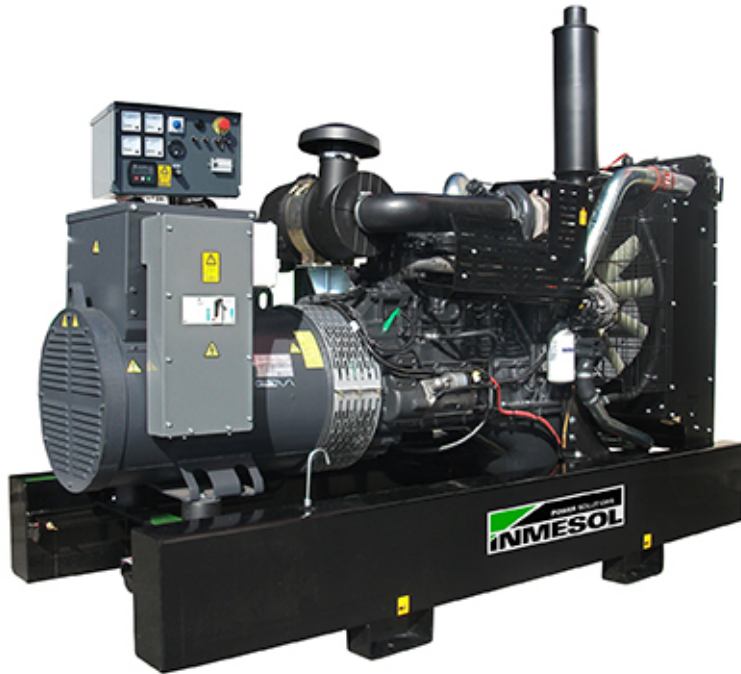


AI-300 - FPT - C87 TE1D

1.500 R.P.M. | 50 Hz

TECHNICAL SPECIFICATIONS



Model:

AI-300

Gen set with manual control panel.

Image for guidance purposes.

| ENGINE | MAKE | MODEL |
|------------|----------------------|----------|
| | FPT | C 87TE1D |
| ALTERNATOR | MODEL | |
| | MECC-ALTE ECO 38-2LN | |

(400 / 230 V)

| | |
|--|----------------|
| CONTINUOUS POWER: (PRP "Prime Power" norma ISO 8528-1) | 270 kVA |
| STAND-BY POWER: (LTP "Limited Time Power" norma ISO 8528-1) | 300 kVA |

Amperes in the different voltages:

| VOLTAGE | HZ | PHASE | COS Ø | PRP KVA/KW | LTP KVA/KW | AMPERAGE |
|---------|----|-------|-------|-------------|-------------|----------|
| 415/240 | 50 | 3 | 0,8 | 272,0/217,6 | 300,1/240,1 | 417,96 |
| 400/230 | 50 | 3 | 0,8 | 272,0/217,6 | 300,1/240,1 | 433,63 |
| 380/220 | 50 | 3 | 0,8 | 272,0/217,6 | 300,1/240,1 | 456,46 |
| 240/139 | 50 | 3 | 0,8 | 272,0/217,6 | 300,1/240,1 | 722,72 |
| 230/133 | 50 | 3 | 0,8 | 272,0/217,6 | 300,1/240,1 | 754,14 |
| 220/127 | 50 | 3 | 0,8 | 272,0/217,6 | 300,1/240,1 | 788,42 |

ELECTRO EXIM SRL

ELECTRO EXIM SRL
21 Ialomicioarei St., sector 1, code 011277, BUCHAREST - ROMANIA
Phone: 0040 21 2231347 - 0040 744 755 390 - FAX: 0040 21 2231201
E-mail: office@electroexim.com - Web: www.electroexim.ro

AI-300 - FPT - C87 TE1D

1.500 R.P.M. | 50 Hz

ENGINE CHARACTERISTICS

| MAKE | MODEL |
|------|----------|
| FPT | C 87TE1D |

GENERAL DATA

| | |
|--------------------------|-------------|
| Power PRP (kWm) | 232.20 |
| Power LTP (kWm) | 256.20 |
| No. cylinders | 6 |
| Cylinder capacity (L) | 8.70 |
| Diameter per stroke (mm) | 117 x 135 |
| Compression ratio | 16.50 |
| Cooling system | LIQUID |
| Injection | COMMON RAIL |
| Suction | TURBO |
| Series regulator | ELECTRONIC |
| Fly wheel coupling | 1-14" |

Lubrication system

| | |
|-------------------------------|------|
| Oil capacity (L) | 28 |
| Oil consumption (%) | 0.20 |
| Min. alarm oil pressure (bar) | 0.60 |

Ventilation system

| | |
|-----------------------------------|-------|
| Air cooling flow (m3/h) | 18504 |
| Combustion air flow (m3/h) | 1200 |
| Max. back pressure for fan (mbar) | 20 |

Exhaust system

| | |
|------------------------------|------|
| Exhaust gas flow (m3/h) | 3322 |
| Exhaust back pressure (mbar) | 50 |
| Temp. exhaust gases (°C) | 488 |

Electrical system

| | |
|----------------------|---------|
| VDC (V) | 24 |
| Battery (Ah) | 2 x 185 |
| Engine start-up (kW) | 4.50 |

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AI-300 - FPT - C87 TE1D

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% | 35.40 |
| 75% | 47.60 |
| 100% | 64.50 |

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT AND NOISE

| LENGTH | DIMENSIONS (MM) | |
|----------------------|-----------------|-------------|
| | WIDTH | HEIGHT |
| 3000 | 1300 | 2319 |
| FUEL TANK (LITRES) | | WEIGHT (KG) |
| 500 | | 2700.00 |
| NOISE LEVEL (dB (A)) | | |

AI-300 - FPT - C87 TE1D

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).

AI-300 - FPT - C87 TE1D

1.500 R.P.M. | 50 Hz

IN INDUSTRIAL 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 aplicated with a phosphate coat and epoxi paint. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Canopy of steel sheet sound proofed with fireproof rockwool, and treated with degreasing liquids and aplicated with a phosphate coat and epoxi paint. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Fuel tank integrated in the base frame provided with fuel level jauge and fuel connections to the engine. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Engine with mechanical engine driven pusher fan. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Industrial silencer with -15 db(A) noise reduction and exhaust outlet tube. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Residencial silencer with -35 db(A) noise reduction with exhaust tube and protection cap. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Electric control cubicle with control module including protection and reading of electrical meassures engine instrumentation fuel level and engine running hours, etc. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Termal and magnetic circuit breaker and termal and magnetic circuit breaker and earth fault relay. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Battery charge alternator. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Starter battery complete with cables to the engine and pole protection. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Installation prepared for earthing spike (spike not included). | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Security protection for heat and moving parts as well as live electrical components. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| External emergency stop push button. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Manual engine oil extraction pump. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Self excited and auto regulated alternator. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Integrated lifting hook for single point lifting with crane, gensets up to 450 kVA (Except in swing-out cover model) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4 Lifting points for gen sets from 450 kVA and bigger. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Preparate for extended fuel tank, fully bomded for leakage protection. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Base frame is prepared for trailer kit installation. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Standard electronic speed governor on engines from 220 kVA (LTP) and up. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Horizontal outlet for hot air | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

AI-300 - FPT - C87 TE1D

1.500 R.P.M. | 50 Hz

DSE 3110 MANUAL CONTROL PANEL

DSE 3110 MANUAL CONTROL PANEL

MANUAL CONTROL, PROTECTION AND DISTRIBUTION panel, assembled on the generator set in metal cabinet with a DSE 3110 engine protection unit.



It has the following:

Image for guidance purposes.

1 STARTER SWITCH

2 EMERGENCY STOP PUSHBUTTON

3 MEASURING INSTRUMENTS:

- Analogue ammeters
- Analogue voltmeter
- Fuel level indicator.
- Digital Hz display and hour meter (DSE 3110)

AI-300 - FPT - C87 TE1D

1.500 R.P.M. | 50 Hz

DSE 3110 MANUAL CONTROL PANEL

4 SET CONTROL AND ENGINE PROTECTION: DSE 3110, allows:

- START AND STOP the set MANUALLY.
- Possibility of doing it AUTOMATICALLY via START ON SIGNAL
- Digital readings of the operating hours and the Frequency
- Controls the main characteristics of the engine, causing an alarm or stopping the machine:
 - 1.Low and High Voltage (STOP)
 - 2.Low and High Frequency and Speed (STOP)
 - 3.Low Oil Pressure and High Coolant Temperature (STOP)
 - 4.Failure of the Alternator Battery-Charger (ALARM)
 - 5.Low fuel level (ALARM)

5 PROTECTIONS:

- Magnetothermal Protections
- Earth Leak Protection
- Protection fuses for control module

AI-300 - FPT - C87 TE1D

1.500 R.P.M. | 50 Hz

DSE 3110 MANUAL CONTROL PANEL

For OPEN sets - Three-phase generators (single phase by request):

| CONT . POW. | MAGNETO. PROTECTION (A) | EARTH LEAK PROTECTION | DISTRIBUTION |
|-------------|-------------------------|------------------------------|--|
| SET POWER | 10 kVA | 4P, 16A (B) 1P+N 16 A (C) | Mod. 16A, 300 mA 1 BASE CEE 3P+N+T 16A 1 BASE CEE 2P+T 16 A |
| | 15 kVA | 4P, 25A (B) 1P+N 16 A (C) | Mod. 25A, 300 mA 1 BASE CEE 3P+N+T 32A 1 BASE CEE 2P+T 16 A |
| | 20 kVA | 4P, 32A (B) | Mod. 32 A, 300 mA POWER TERMINALS |
| | 30 kVA | 4P, 50 A (B) | Mod. 63 A, 300 mA POWER TERMINALS |
| | 40 kVA | 4P, 63 A (B) | Mod. 63 A, 300 mA POWER TERMINALS |
| | 50 kVA | 4P, 80 A (B) | Electronic adjustable POWER TERMINALS |
| | 60 kVA | 4P, 100 A (B) | Electronic adjustable POWER TERMINALS |
| | 75-80 kVA | 4P, 125 A (B) | Electronic adjustable POWER TERMINALS |
| | 100 kVA | 3P, 160 A (B) | Electronic adjustable POWER TERMINALS |
| | 125-170 kVA | 3P, 250 A (B) | Electronic adjustable POWER TERMINALS |
| | 180-275 kVA | 3P, 400 A (B) | Electronic adjustable OUTPUT DIRECTLY FROM THE CIRCUIT BREAKER |
| | 300-430 kVA | 3P, 630 A (B) | Electronic adjustable OUTPUT DIRECTLY FROM THE CIRCUIT BREAKER |
| | 450-550 kVA | 3P, 800 A (B) | Electronic adjustable OUTPUT DIRECTLY FROM THE CIRCUIT BREAKER |
| | 570-665 kVA | 3P, 1000 A (B) | Electronic adjustable OUTPUT DIRECTLY FROM THE CIRCUIT BREAKER |

AI-300 - FPT - C87 TE1D

1.500 R.P.M. | 50 Hz

DSE 3110 MANUAL CONTROL PANEL

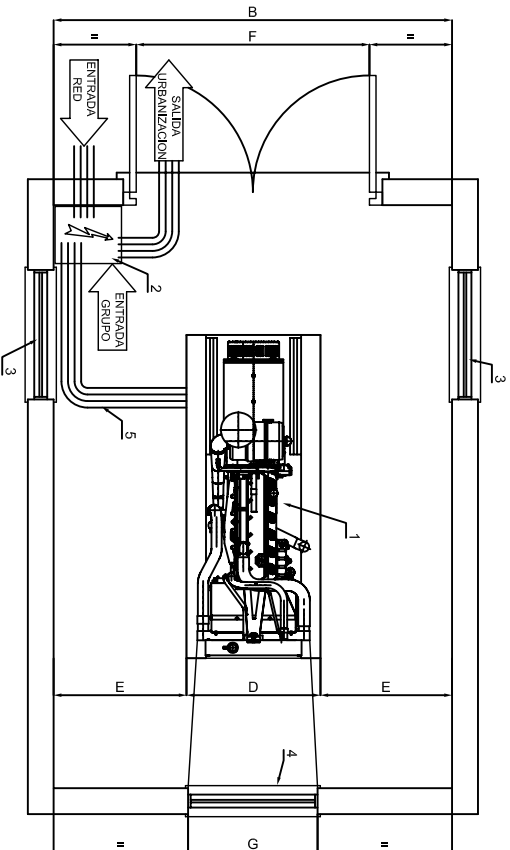
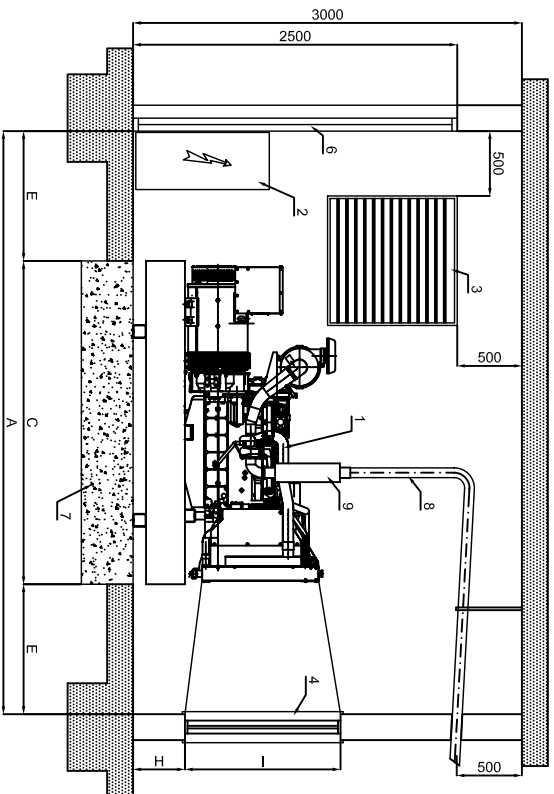
6 OPTIONAL:

AUTOMATIC PANEL FOR MANUAL GENERATOR: ATS DSE 334

- This panel provides the manual control generator with a reserve operation from the Mains, as the ATS sends the command to start and stop the generator, when it detects a supply failure and when the Mains is restored



Cubicle composed of the electronic control module which is detecting a mains failure and of 2 contactors mechanically and electrically interlocked or a motorized switch controlled by the above electronic controller who are realizing the change of supply from the GEN SET or the MAINS to the load.



| DIMENSIONES DE SALA SEGUN POTENCIA | | | | | | | | | | | | |
|------------------------------------|------|------|------|------|------|------|------|-----|-----|-----|------|----------------------------|
| POTENCIA | A | B | C | D | E | F | G | H | I | d | PESO | SECCION HUECO ENTRADA AIRE |
| 30 Kva | 3700 | 2730 | 1700 | 730 | 1000 | 1230 | 700 | 500 | 600 | 50 | 630 | 2x0.50 m2 |
| 40 Kva | 3700 | 2730 | 1700 | 730 | 1000 | 1230 | 800 | 500 | 700 | 50 | 720 | 2x0.60 m2 |
| 60 Kva | 3900 | 2900 | 1900 | 900 | 1000 | 1400 | 800 | 500 | 800 | 80 | 1000 | 2x0.80 m2 |
| 75 Kva | 3900 | 2900 | 1900 | 900 | 1000 | 1400 | 800 | 500 | 800 | 80 | 1080 | 2x0.80 m2 |
| 85 Kva | 3900 | 2900 | 1900 | 900 | 1000 | 1400 | 800 | 500 | 800 | 80 | 1100 | 2x0.90 m2 |
| 105 Kva | 3900 | 2900 | 1900 | 900 | 1000 | 1400 | 900 | 500 | 900 | 80 | 1400 | 2x1.00 m2 |
| 130 Kva | 4360 | 3035 | 2360 | 1035 | 1000 | 1535 | 900 | 500 | 900 | 80 | 1440 | 2x1.00 m2 |
| 150 Kva | 4360 | 3035 | 2360 | 1035 | 1000 | 1535 | 900 | 500 | 900 | 80 | 1460 | 2x1.00 m2 |
| 200 Kva | 4360 | 3035 | 2360 | 1035 | 1000 | 1535 | 900 | 500 | 900 | 80 | 1608 | 2x1.00 m2 |
| 275 Kva | 5000 | 3300 | 3000 | 1300 | 1000 | 1800 | 1000 | 500 | 900 | 110 | 1950 | 2x1.00 m2 |
| 300 Kva | 5000 | 3300 | 3000 | 1300 | 1000 | 1800 | 1000 | 500 | 900 | 110 | 2770 | 2x1.00 m2 |
| 350 Kva | 5000 | 3300 | 3000 | 1300 | 1000 | 1800 | 1000 | 500 | 900 | 110 | 3295 | 2x1.00 m2 |
| 400 Kva | 5000 | 3300 | 3000 | 1300 | 1000 | 1800 | 1000 | 500 | 900 | 110 | 3295 | 2x1.30 m2 |

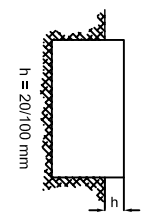
- NOMENCLATURA**
- 1.- GRUPO ELECTROGENO
 - 2.- CUADRO DE CONTROL
 - 3.- HUECO ENTRADA DEL AIRE
 - 4.- TUNEL DE EXPULSION DEL AIRE
 - 5.- BANDEJA PASACABLES
 - 6.- PUERTA DE ACCESO
 - 7.- BASE HORMIGON ARMADO H-175
 - 8.- TUBO DE ESCAPE
 - 9.- SILENCIADOR DE ESCAPE

EL Ø DE LA TUBERIA DE EXTENSION DEL ESCAPE PUEDE SER EL MISMO QUE EL DEL SILENCIADOR HASTA 5 m. PARA DISTANCAS MAYORES DE 5 m. DEBE AUMENTARSE EL Ø DE LA TUBERIA 10 mm POR CADA 10 m MAS DE DISTANCIA ENTRE EL GRUPO ELECTROGENO Y LA SALIDA EXTERIOR

CALCULO ESPESOR LOSA DE HORMIGON

$$D = \frac{W}{d \times B \times L}$$

D = altura bloque de hormigon
W = peso total grupo electrogeno.
d = densidad del hormigon (2400 kg/m3)
B = anchura bloque de hormigon (m)
L = longitud bloque de hormigon (m)



| | | | | |
|---|--|------------|-------------|--------------------|
| | PROYECTO: GRUPO ESTATICO ESTANDAR IVECO | | | |
| | MODIFICADO | J.S.BELAR | 07-Sep-2011 | MATERIAL |
| | DIBUJADO | J.S.BELAR | 03-Mar-2006 | TOLERANCIA GENERAL |
| | COMPROBADO | A.L.SOLANO | 07-Sep-2011 | UDS. I |
| DENOMINACION: GRUPOS EST-STD IVECO | | | | |
| DIMENSIONES DE SALA | | | | |
| RESO | | | | EXPEDIENTE: |
| ESCALA | | | | Nº PLANO |
| | | | | MARCA |