

AK-011 - KOHLER - KDW 1404

1.500 R.P.M. | 50 Hz

TECHNICAL SPECIFICATIONS



Model:

AK-011

Gen set with manual control panel.

Image for guidance purposes.

(400 / 230 V)

| ENGINE | MAKE | MODEL |
|------------|----------------------|----------|
| | KOHLER | KDW 1404 |
| ALTERNATOR | MODEL | |
| | ZANARDI ATO 28-1VS/4 | |

| | |
|--|---------------|
| CONTINUOUS POWER: (PRP "Prime Power" norma ISO 8528-1) | 10 kVA |
| STAND-BY POWER: (LTP "Limited Time Power" norma ISO 8528-1) | 11 kVA |

Amperes in the different voltages:

| VOLTAGE | HZ | PHASE | COS Ø | PRP KVA/KW | LTP KVA/KW | AMPERAGE |
|---------|----|-------|-------|------------|------------|----------|
| 415/240 | 50 | 3 | 0,8 | 10,0/8,0 | 11,0/8,8 | 15,32 |
| 400/230 | 50 | 3 | 0,8 | 10,0/8,0 | 11,0/8,8 | 15,9 |
| 380/220 | 50 | 3 | 0,8 | 10,0/8,0 | 11,0/8,8 | 16,73 |
| 240/139 | 50 | 3 | 0,8 | 10,0/8,0 | 11,0/8,8 | 26,49 |
| 230/133 | 50 | 3 | 0,8 | 10,0/8,0 | 11,0/8,8 | 27,65 |
| 220/127 | 50 | 3 | 0,8 | 10,0/8,0 | 11,0/8,8 | 28,9 |

ELECTRO EXIM SRL

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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

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ENGINE CHARACTERISTICS

| MAKE | MODEL |
|--------|----------|
| KOHLER | KDW 1404 |

GENERAL DATA

| | |
|--------------------------|------------|
| Power PRP (kWm) | 10.50 |
| Power LTP (kWm) | 11.50 |
| No. cylinders | 4 |
| Cylinder capacity (L) | 1.40 |
| Diameter per stroke (mm) | 75 x 77,6 |
| Compression ratio | 22.80 |
| Cooling system | LIQUID |
| Injection | INDIRECT |
| Suction | NATURAL |
| Series regulator | MECHANICAL |
| Fly wheel coupling | 5 - 6,5" |

Lubrication system

| | |
|-------------------------------|------|
| Oil capacity (L) | 3.30 |
| Oil consumption (%) | 0.02 |
| Min. alarm oil pressure (bar) | 1.50 |

Ventilation system

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

Exhaust system

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

Electrical system

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

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ALTERNATOR CHARACTERISTICS

MODEL

ZANARDI ATO 28-1VS/4 (400 / 230 V)

GENERAL DATA

| | |
|-----------------------|----------------|
| Power PRP (kVA) | 10.00 |
| Power LTP (kVA) | 11.00 |
| Efficiency Alt. 3/4 % | 86.40 |
| Efficiency Alt. 4/4 % | 86.00 |
| No. Poles | 4 |
| Voltage regulator | COMPOUND TRANS |
| No. wires | 6 |
| Insulation | H |
| Xd (%) | - |
| X'd (%) | - |
| X | - |
| Degree of protection | IP23 |

GENERATOR SET CONSUMPTION

| % POWER USED | LITRES/HOUR |
|--------------|-------------|
| 50% | 1.70 |
| 75% | 2.50 |
| 100% | 3.40 |

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT AND NOISE

| LENGTH | DIMENSIONS (MM) | |
|----------------------|-----------------|-------------|
| | WIDTH | HEIGHT |
| 1300 | 580 | 1298 |
| FUEL TANK (LITRES) | | WEIGHT (KG) |
| 80 | | 350.00 |
| NOISE LEVEL (dB (A)) | | |

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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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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"/> |

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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)

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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

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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 |

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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.