# Product: **ESE 9 MP**







Liquid cooling



50 Hz



Three-phase



Diesel







DIESEL GENERATOR	STANDBY POWER	PRIME POWER	
ESE 9 MP	(ESP)	(PRP)	
Power (kVA)	9	8,1	
Power (kW)	8,1	7,2	
Speed (rpm)	150	1500	
Voltage (V)	23	230	
Power factor (cos phi)	0,8	8	
Amperage (Amp)	35	5	

Endress Group Romania S.R.L. certifications:

ISO 9001: 2008, ISO 14001: 2005, ISO 18001: 2008.

ZENESSIS generators are CE compliant, and are tested according to the EU legislation on noise levels 2000/14 / EC.

Reference ambient conditions: 1000 mbar; 25° C; 30% relative humidity; power according to ISO 3046 / ISO 8528 standards.

## Prime power (PRP) - ISO 8528

Prime power (PRP) – represents the continuous power a generator is able to provide continuously while supplying a variable electrical load when operating for an unlimited number of hours per year, under the agreed operating conditions, maintenance intervals and procedures being performed as prescribed by the manufacturer.

## Standby Power (ESP) - ISO 8528

Standby Power (ESP) is the maximum power available at a variable load, under the operating conditions provided, that a generator is able to provide in case of power failure or under test conditions, maintenance intervals and procedures being performed as prescribed by the manufacturer.

#### **Endress Group Romania S.R.L.**

#### Offices:

Bucharest: km 16 A1 - Ciorogarla, Sos. Bucuresti, Nr. 108

#### **Production:**

Germany, Grafenberg, Werner von Siemens Str. 3

Romania, Bocsa, Str. Medresului, Nr. 17, Caras-Severin County...

BOCSA,str. Medresului 17, Tel.: 0040.255.227.825; Fax: 0040.255.227.828 . BUCURESTI: km 16 A1 – Ciorogarla, Sos. Bucuresti, Nr. 108; Tel.: 0040.21.350.09.95; Fax: 0040.31.817.66.08. E-mail: office@endress-group.ro;

Web: www.endress-group.ro





# 1. DIESEL ENGINE

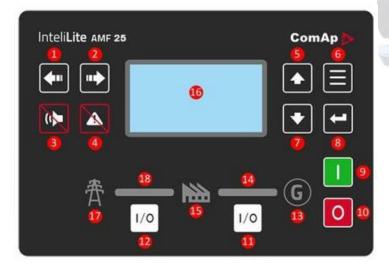
ENGINE SPECIFICATIONS	
Туре	PERKINS
Model	403A-11G1
No. of cylinders & arrangement	3 in line
Induction system	Natural aspiration
Cooling system	Liquid cooling
Standby power (kWm)	9.5
Speed (rpm)	1500
Displacement (I)	1,131
Bore & Stroke (mm)	77 x 81
Compression factor	23:1
Regulator	Mechanic
Total oil capacity (I)	4,9
Coolant capacity of engine (I)	5,2
Fuel consumption at 100% load in prime mode (I / h)	3

## 2. ALTERNATOR

ALTERNATOR SPECIFICATIONS	MeccAlte or Strathon
Model	ECP28-OS/4 or ECO 9 KW
Frequency (Hz)	50
Concept	Brushless, 4 poles
Phases	3 + n
Voltage(V)	400 / 230
Protection class	Н
Excitation system	Electronic
Performance	93%
Protection	IP23
Certification test	EN 10204 : 2001

#### 3. PANOU COMANDA

Made in metal box, IP54 degree, with lock. The control panel is equipped with the ComAp AMF25 control module, with the possibility of starting and stopping the generator, both in automatic and in electric mode. The control panel monitors the power grid and can command and control the ATS panel (automatic transfer switch).



- 1. Left button
- 2. Right button
- 3. HORN RESET button
- 4. FAULT RESET button
- 5. **UP** button
- 6. PAGE button
- 7. **DOWN** button
- 8. **ENTER** button
- 9. **START** button
- 10. **STOP** button
- 11. GCB button. Works in MAN and TEST modes only
- 12. MCB button. Works in MAN and TEST modes only
- 13. **GENERATOR** status indicator
- 14. **GCB ON**. Green LEDs are on if GCB is closed and Gen-set is healthy.
- 15. **LOAD**
- 16. Graphic B/W display, 132x64 pixels
- 17. MAINS status indicator
- 18. **MCB ON**. Green LEDs are on if MCB is closed and Mains is healthy



## **♦** Control panel standard specifications:

The command and control panel is mounted inside the casing, in a metal box with IP 54, equipped with a viewing glass, equipped with:

- ComAp AMF 25 command module
- Static battery charger
- Emergency stop button & circuit breaker fuses
- Overcurrent differential protection
- Protection relays

## **Configuration:**

- 1. ComAp AMF 25 command module
- 2. Circuit Breaker protection
- 3. Locks
- 4. Alarm
- 5. START button ON/OFF
- 6. Hinges
- 7. Maintenance schedule
- 8. Metal box

# ◆ Command module standard specifications:

- Microprocessor control
- 132 x 64 pixel LCD display
- Programming on front panel as well as through PC software
- Control buttons and soft touch navigation
- Remote communication via USB or with optional modules via RS232, RS485, Ethernet or SMS
- Store 350 events with date and time
- Maintenance programming 3 levels
- Engine heater control Optional

## Displays:

**Engine:** engine speed; oil pressure; coolant temperature; running time; battery voltage; maintenance data.

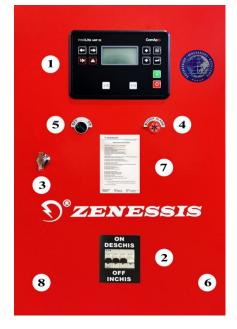
**Alternator:** voltage (L - L, L - N); current (L1 - L2 - L3); frequency; kW; Pf; kVAr; kWh,kVAh, kVarh; phase sequence.

**Main network:** voltage (L - L, L - N); frequency, mains ready; mains off; generator set ready, generator set disconnected, active power kW, apparent power kVA, reactive power kVA r, power factor, phase sequence.

- **Warning:** battery faulty charging, low battery voltage, fail to stop, low fuel level, overload, phase reversing, speed sensor failure.
- **Alarms:** low oil pressure, high engine temperature, under / over voltage, under / overfrequency, under / overvoltage, ECU fault -optional.
- Status displays: missed start, emergency stop, low oil pressure, high engine temperature, under / overspeed, under / overfrequency, under / overvoltage, oil sensor, phase rotation, overload, overcurrent group, phase reversal.
- ♦ Static battery charger: Made with TSD technology, with high efficiency. Protected for short-circuit currents, it can be used as a current source, input voltage 196-264 V, output voltage 27.6 V / 5A or 13.8 V / 5A.

## **♦ Standards:**

Electrical safety / EMC, BS EN 60950; BS EN 60950 – 6 – 2 EMC; BS EN 61000 – 6 – 4 EMC.

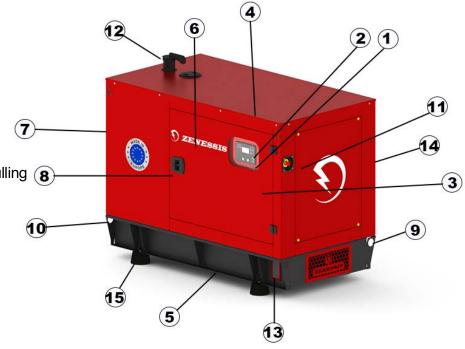




## 4. HOUSING

Made of galvanized steel, painted in electrostatic field, soundproofed. It is modularly designed with in-door access doors on all sides of the generator. The exhaust pan is residential type, mounted inside the casing. The carcasses are designed to optimize the cooling of the engine and alternator assembly, and can be mounted outdoors, providing protection against weathering and low noise levels.

- 1. Command module
- 2. View window
- 3. Access door for control module
- 4. Points for crane lifting (optional)
- 5. Spaces for handling with the forklift
- 6. Engine and alternator access door
- 7. Hot air outlet grills
- 8. Handles provided with locks
- 9. Fuel supply bus (optional)
- 10. "Sleigh chassis" fitted with lifting/pulling **8** holes
- 11. Emergency button
- 12. Exhaust Gas Valve
- 13. Cable access space
- 14. Air intake grills
- 15. Protective pads



#### **5. DIMENSIONS & WEIGHT**

Opened generator sizes & weight		
Sizes (length x width x height) (mm)	1600 x 900 x1715	
Weight (kg)	360	
Fuel tank capacity (liters)	50	
Noise level (from distance of 7m)	82 db	
Closed generator sizes & weight		
Sizes (length x width x height) (mm)	1870 x 1010 x1415	
Weight (kg)	475	
Fuel tank capacity (liters)	50	
Noise level (from distance of 7m)	70 db	

#### 6. STANDARD FEATURES

Control & comand panel with indicators and measuring devices, IP 54 protection

Stating charger for charger

Dinamic alternator for battery charging







Thermostatic heater for cooling liquid

Oversized starting battery

Emergency stop button







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Chassis with fuel tank dimensioned for an 8 hour autonomy

Vibration dampers

Device for measuring fuel level

Electric lines protected by tubing and seal

Residential exhaust pipe



Protective pads



Metal hinges



Access doors provided with locks

System for manipulation with crane or forklift



Fireproof antiphonic pillow



# 7. OPTIONAL FEATURES

Anti-condensation embedding system for electric panels

Heating system for fuel/ oil

Circulation pump for heating cooling liquid

Oil evacuation pump

Motorized AAR, patented invention ENDRESS-Patent OSIM 00048/2015

AAR Transfer panel for 3/4 poles

3/4 poles differential protection

Sockets 400V/ 230V



Liquid retention tray



Liquid leak detection sensor



Remote monitoring & control system



Exterior fuel filler cap with lock



Pocket system integrated in the chassis for lifting with forklift



Fire extinguisher with internal housing support



Super soundproof housing



Intake air heating spark plug















Fuel filter with water detection

Bypass panel-petented invention ENDRESS-Patent OSIM 00010/ 2012

Auto trailer

Remote control start

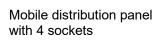
Lack of grounding protection

Interior lighting with switches operated at door opening



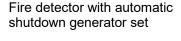
Grounding electrodes

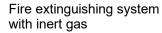
Fuel transfer automatic pump









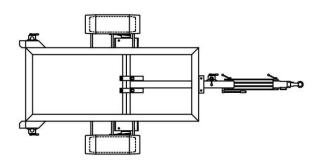


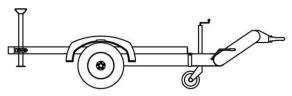




Optional: RAR homologated auto trailer

Model: EGR 750 T











Created in Germany – Assembled in Romania Warranty: 24 months or 3000 operating hours

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