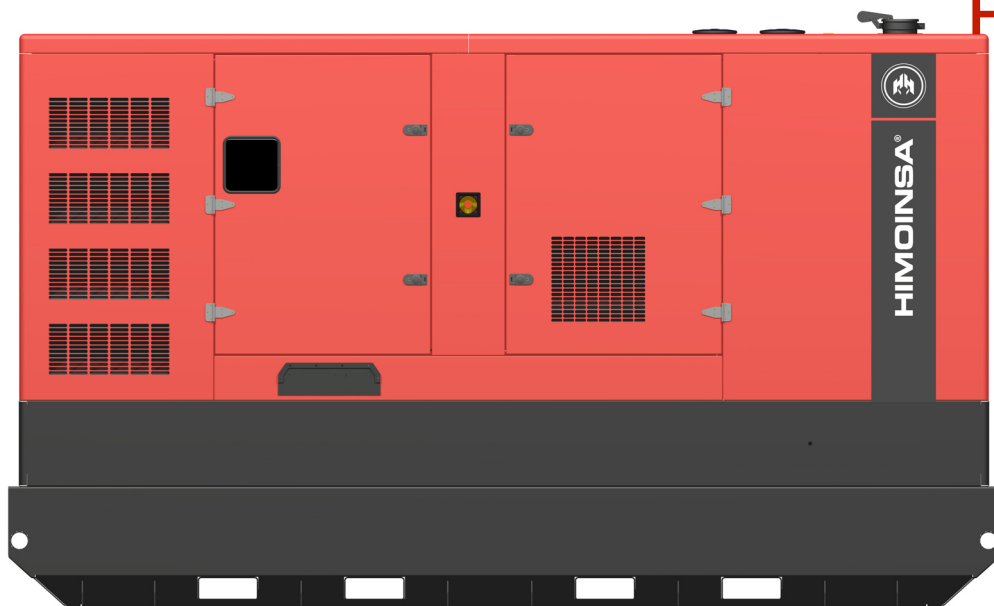




HIMOINSA®
THE ENERGY



MODEL
HRMW-350 T5

HR RANGE
Soundproofed rental
Powered by MTU

- H1R
- WATER-COOLED
- THREE PHASE
- 50 HZ
- STAGE 3A
- DIESEL

Generating Rates



| SERVICE | | PRP | STANDBY |
|-----------------------|---------|---------------|---------|
| Power | kVA | 350 | 400 |
| Power | kW | 280 | 320 |
| Rated Speed | r.p.m. | 1.500 | |
| Standard Voltage | V | 400/230 | |
| Available Voltages | V | 230 - 230/132 | |
| Rated at power factor | Cos Phi | 0,8 | |

01

HIMOINSA Company with quality certification ISO 9001

HIMOINSA gensets are compliant with EC mark which includes the following directives:

- 2006/42/CE Machinery safety.
- 2006/95/EC Low voltage.
- 2004/108/CE Electromagnetic compatibility.
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC)
- 97/68/EC Emissions of gaseous and particulate pollutants. (amended by 2002/88/EC & 2004/26/EC)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2005 normative: 1000 mbar, 25°C, 30% relative humidity.

Prime Power (PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24 h of operation shall not exceed 70 % of the PRP.

Emergency Standby Power (ESP):

According to ISO 8528-1:2005, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP

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Subsidiaries:

ITALY | PORTUGAL | POLAND | GERMANY | SINGAPORE | UAE | MEXICO | PANAMÁ | ARGENTINA | UK





Engine Specifications 1.500 r.p.m.

| ENGINE | | PRP | STANDBY |
|---|------|------------------------------|---------|
| Rated Output | kW | 315,4 | 348,4 |
| Manufacturer | | MTU | |
| Model | | 8V1600G10F | |
| Engine Type | | Diesel 4 strokes-cycle | |
| Injection Type | | Direct | |
| Aspiration Type | | Turbocharged and aftercooled | |
| Ciyinders Arrangement | | 8V | |
| Bore and Stroke | mm | 122 x 150 | |
| Displacement | L | 14 | |
| Cooling System | | coolant | |
| Lube Oil Specifications | | S10 W40 | |
| Compression Ratio | | 17,5 | |
| Fuel Consumption StandBy | l/h | 85,75 | |
| Fuel Consumption 100% PRP | l/h | 79,36 | |
| Fuel Consumption 75 % PRP | l/h | 61,5 | |
| Fuel Consumption 50 % PRP | l/h | 44,22 | |
| Fuel Consumption 25 % PRP | l/h | 25,79 | |
| Lube Oil Consumption Full Load | | 0,5 % of fuel consumption | |
| Total oil capacity including tubes, filters | L | 46 | |
| Total Coolant Capacity | L | 84 | |
| Governor | Type | Electrical | |
| Air Filter | Type | Dry | |
| Inner diameter exhaust pipe | mm | 106 | |

Generator

| Generator | | |
|--------------------------------|-------|--------------------------------|
| Poles | Num | 4 |
| Winding Conections (standard) | | Star-serie |
| Frame Mounting | | S-1 14" |
| Insulation | Class | H class |
| Enclosure (according IEC-34-5) | | IP23 |
| Exciter System | | self-excited, brushless |
| Voltage Regulator | | A.V.R. (Electronic) |
| Bearing | | Single bearing |
| Coupling | | Flexible disc |
| Coating type | | Standard (Vacuum impregnation) |



Application Data

| Exhaust System | | |
|---|--------|-----|
| Maximum exhaust temperature | °C | 499 |
| Exhaust Gas Flow | m3/min | 72 |
| Maximum allowed back pressure | mbar | 150 |
| Exhaust Flange Size (external diameter) | mm | 160 |

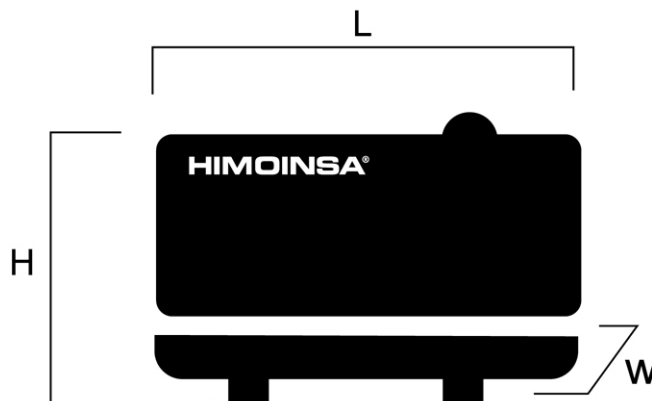
| Air Inlet System | | |
|-------------------------|------|------|
| Intake Air Flow | m3/h | 1548 |
| Cooling Air Flow | m3/s | 6,5 |
| Alternator fan air flow | m3/s | 0,8 |

| Starting System | | |
|-------------------------------|-----|--------|
| Starting Motor | kW | 8 |
| Starting Motor | CV | 10,88 |
| Recommended Battery Capacity | Ah | 75 x 2 |
| Auxiliary Voltage | Vcc | 24 |
| Current of starter (Rush) | A | 800 |
| Current of starter (Cranking) | A | 250 |

| Fuel System | | |
|-------------------------|---|--------|
| Fuel Oil Specifications | | Diesel |
| Fuel Tank | L | 2.090 |



Dimensions



| H1R | Weight and Dimensions | | |
|-----|---|----------------|----------|
| (L) | Length | mm | 4.602 |
| (H) | Height | mm | 2.809 |
| (W) | Width | mm | 1.850 |
| | Maximum shipping volume (standard supplier) | m ³ | 23,91 |
| (*) | Wet weight | Kg | 6.145 |
| | Fuel tank capacity | L | 2.090,0 |
| | Autonomy | Hours | 34 |
| | Sound pressure level | dB(A)@7m | 68 ± 2,3 |

(*) (with standard accessories)

STANDARD VERSION (Steel tank)

Himoinsa has the right to modify any characteristic without prior notice.
Weights and dimensions based on standard products. Illustrations may include optional equipment.
Technical data described here correspond with the available information at the moment of printing.
Industrial design under patent.

Local Distributor



Controllers Features

| | CEM 7 | CEC 7 | CEA 7 | CEM7 + CEC7 |
|--------------------------------------|-------|-------|-------|-------------|
| GENERATOR READINGS | | | | |
| • Voltage among phases | • | • | • | • |
| • Voltage among phases and neutral | • | • | • | • |
| • Amperage | • | • | • | • |
| • Frequency | • | • | • | • |
| • Apparent power (kVA) | • | • | • | • |
| • Active power (kW) | • | • | • | • |
| • Reactive power (kVAr) | • | • | • | • |
| • Power factor | • | • | • | • |
| MAINS READINGS | | | | |
| • Voltage among phases | x | • | • | • |
| • Voltage among phase and neutral | x | • | • | • |
| • Amperage | x | • | • | • |
| • Frequency | x | • | • | • |
| • Apparent power | x | x | • | • |
| • Active power | x | x | • | • |
| • Reactive power | x | x | • | • |
| • Power factor | x | x | • | • |
| ENGINE READINGS | | | | |
| • Coolant temperature | • | x | • | • |
| • Oil pressure | • | x | • | • |
| • Fuel level (%) | • | x | • | • |
| • Battery voltage | • | x | • | • |
| • R.P.M. | • | x | • | • |
| • Battery charge alternator voltage | • | x | • | • |
| ENGINE PROTECTIONS | | | | |
| • High water temperature | • | x | • | • |
| • High coolant temperature by sensor | • | x | • | • |
| • Low engine temperature by sensor | • | x | • | • |
| • Low oil pressure | • | x | • | • |
| • Low oil pressure by sensor | • | x | • | • |
| • Low coolant level | • | x | • | • |
| • Unexpected shutdown | • | x | • | • |
| • Fuel storage | • | x | • | • |
| • Fuel storage by sensor | • | x | • | • |
| • Stop failure | • | x | • | • |
| • Battery voltage failure | • | x | • | • |
| • Battery charge alternator failure | • | x | • | • |
| • Overspeed | • | x | • | • |
| • Underspeed | • | x | • | • |
| • Start failure | • | x | • | • |
| • Emergency Stop | • | • | • | • |
| ALTERNATOR PROTECTIONS | | | | |
| • High frequency | • | • | • | • |
| • Low frequency | • | • | • | • |
| • High voltage | • | • | • | • |
| • Low voltage | • | • | • | • |
| • Short-circuit | • | x | • | • |
| • Asymmetry among phases | • | • | • | • |
| • Incorrect phase sequence | • | • | • | • |
| • Inverse power | • | x | • | • |
| • Overload | • | x | • | • |
| • Genset signal droop | • | • | • | • |

- Standard
- x Not included
- Optional

NOTE: All protections are programmable to make "warning" or "stop with cooling time" or "without"



Controllers Features

| | CEM 7 | CEC 7 | CEA 7 | CEM7 + CEC7 |
|------------------------------------|---------------|-------|---------------|---------------|
| COUNTERS | | | | |
| Total hour counter | • | • | • | • |
| Partial hour counter | • | • | • | • |
| Kilowattimeter | • | • | • | • |
| Starts valid counters | • | • | • | • |
| Starts failure counters | • | • | • | • |
| Maintenance | • | • | • | • |
| COMMUNICATIONS | | | | |
| RS232 | • | • | • | • |
| RS485 | • | • | • | • |
| Modbus IP | • | • | • | • |
| Modbus | • | • | • | • |
| CCLAN | • | X | • | • |
| Software for PC | • | • | • | • |
| Analogic modem | • | • | • | • |
| GSM/GPRS modem | • | • | • | • |
| Remote screen | • | X | • | • |
| Telesignal | •(8+4) | | •(8+4) | •(8+4) |
| J1939 | • | X | • | • |
| FEATURES | | | | |
| Alarms history | (10) / (+100) | -10 | (10) / (+100) | (10) / (+100) |
| External start | • | • | • | • |
| Start inhibition | • | • | • | • |
| Mains failure start | •(CEC7) | • | • | • |
| Start under normative EJP | • | X | • | • |
| Genset contactor activation | • | X | X | • |
| Main & Genset contactor activation | X | • | • | • |
| Fuel transfer control | • | X | • | • |
| Engine temperature control | • | X | • | • |
| Manual override | • | X | • | • |
| Programmable alarms | • | X | • | • |
| Genset start function in test mode | • | X | • | • |
| Programmable outputs | • | X | • | • |
| Multilingual | • | • | • | • |
| SPECIAL FUNCTIONS | | | | |
| Positioning GPS | • | | • | • |
| Synchronization with mains | • | | • | • |
| Mains Synchronism | • | | • | • |
| Second Zero suppression | • | | • | • |
| RAM 7 | • | | • | • |
| Remote screen | • | | • | • |
| Timer | • | | • | • |

- Standard
- x Not included
- Optional

CEC7: available when the controller CEC7 is incorporated to the installation
 MPS 5.0: available application when the module MPS 5. has been incorporated to the panel.
 Note: AS5 + CC2 configuration, will have all CEM7 functionality plus CEC7 mains readings.



Generating Sets Standard and Optional Features

Engine

- Diesel engine
- 4 strokes-cycle
- 24V Electrical system
- Radiator with blowing fan
- Water separator decanting filter (visible level)
- Electronic governor
- Sender WT
- Senders OP
- Radiator coolant level sender
- Dry air cleaner
- Hot parts protection
- Moving parts protection

Alternator

- Self-excited and Self-regulated
- IP23 protection degree
- Insulation H class

Electrical system

- M5 control panel with digital CEM7 controller and switched emergency stop
- Power panel with bus bars from breaker
- Safety relay in output terminal (thermomagnetical trip and alarm in controller)
- Battery isolator
- Earth leakage protection adjustable (time & sensibility) standard in M5 and AS5 configuration with MCCB
- MCCB 4P
- Battery charger alternator with ground connection
- Starting battery/ies installed and connected to the engine (supports included)
- Ground connection electrical installation with connection ready for ground pike (not supplied)

Soundproofed version

- Steel made chassis
- Oil sump extraction kit
- External filling of the fuel tank with safety key
- EMERGENCY STOP BUTTON (double protection for emergency stop Interior in panel + Exterior in canopy)
- Mechanized for power cable output
- Door with window to visualize control panel, alarms and measurements
- Handhole to fill the radiator
- Pre-installation or niche to house the quick connection hydraulic fittings for fuel transfer
- Pressure locks
- Anti-leakage chassis, predisposed to retain liquids (retention tray)
- High capacity fuel tank, with contention base and easy external filling
- Handhole for fuel tank cleaning and drainage
- Handhole for chassis cleaning
- Oversized chassis for canopy protection
- Pulling skid and pockets for transportation with forklift
- Tilting cap in the exhaust
- Antivibration shock absorber
- Chassis with integrated fuel tank
- Fuel level sender



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Generating Sets Standard and Optional Features

Soundproofed version

- Sound attenuated canopy made of high quality steel metal.
 - High mechanical strenght
 - Low noise level
 - Attenuation through high density rock wool material
 - Epoxy Powder coating
 - Easy acces for service mainteance
 - Reinforced lifting eye to lift by crane
 - Steel made residential silencer -35db(A) attenuation.
- Optional :
- 3 way valve fuel filling (available in 1/2" and 3/8" fittings)
 - Fuel transfer pump



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PDF Summary

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Report Type: Data Sheet - Hr range

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Page 1. Genset data

Page 2. Engine Specifications. Generator Specifications.

Page 3. Installation Data

Page 4. Dimensions

Page 5. Controller features (I)

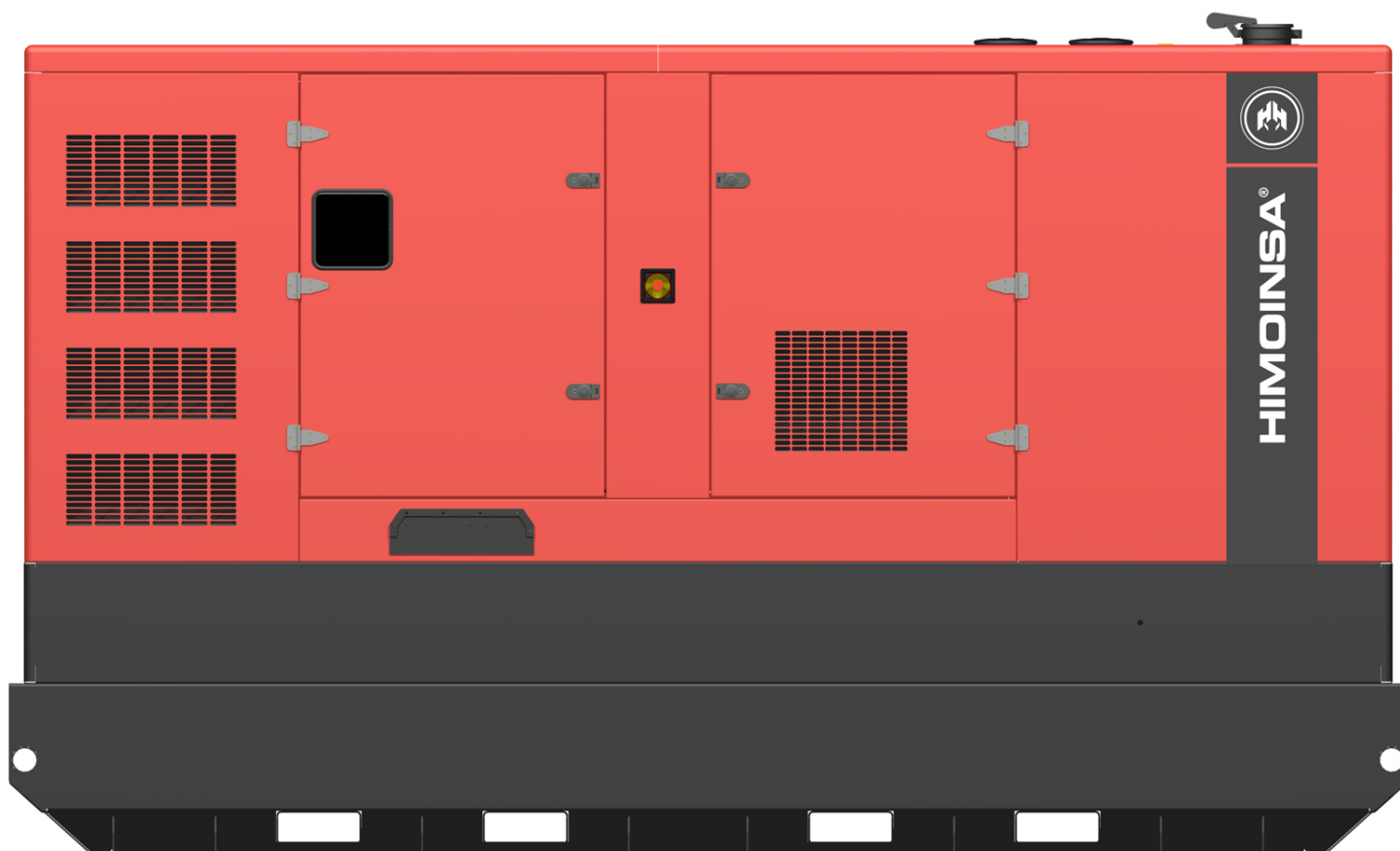
Page 6. Controller features (II)

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Page 8. Generator Features & Options

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