HIMOINSA
A YANMAR COMPANY




MODEL
# HSW-280 T5
INDUSTRIAL RANGE
Standard soundproofing
Powered by SCANIA

- F1
- WATER-COOLED
- THREE PHASE
- 50 HZ
- DIESEL

## Generating Rates

| SERVICE | | PRP / DCP | ESP |
|---|---|---|---|
| Power | kVA | 283 | 312 |
| Power | kW | 227 | 249 |
| Rated Speed | r.p.m. | 1.500 | |
| Main voltage | V | 400/230 | |
| Available Voltages | V | 200/115 - 230 V (t) | |
| Rated at power factor | Cos Phi | 0,8 | |



**HIMOINSA Company with quality certification ISO 9001**
**HIMOINSA gensets are compliant with EC mark which includes the following directives:**

- 2006/42/CE Machinery safety.
- 2014/30/UE Electromagnetic compatibility.
- 2014/35/UE electrical equipment designed for use within certain voltage limits
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2020 normative: 1000 mbar, 25ºC, 30% relative humidity.

Limited-time running power (LTP):
According to ISO ISO 8528-1:2020, 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 ISO 8528-1:2020, 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

Data Center Power (DCP): Complies with Uptime Institute. The manufacturer declares an acceptable average load factor 100%.
It is required a mean time between a revision of 12000h and an oil change of 300h.
The genset must not be used as a main power source. If the model is for DCP application, you have to inform to factory.

"Class G2" performance according to the load impact test according to ISO 8528-5:2020

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## Engine Specifications 1.500 r.p.m.

| ENGINE | | PRP / DCP | ESP |
|---|---|---|---|
| Rated Engine Output | kW | 242 | 267 |
| Manufacturer | | SCANIA | |
| Model | | DC9-72A(02-12) | |
| Engine Type | | 4-stroke diesel | |
| Injection Type | | Direct | |
| Aspiration Type | | Turbocharged and after-cooled | |
| Number of cylinders and arrangement | | 5-L | |
| Bore and Stroke | mm | 130 x 140 | |
| Displacement | L | 9,3 | |
| Cooling System | | Coolant | |
| Lube Oil Specifications | | ACEA E3,E4,E5 or E7 | |
| Compression Ratio | | 16:1 | |
| Lube oil consumption with full load | g/kWh | 0,2 | |
| Total oil capacity | L | 38 | |
| Total coolant capacity | L | 38 | |
| Governor | Type | Electrical | |
| Air Filter | Type | Dry | |
| Inner diameter exhaust pipe | mm | 90 | |



## Generator

| Generator | | |
|---|---|---|
| Manufacturer | | MECC ALTE |
| Poles | No. | 4 |
| Connection type (standard) | | Star-series |
| Mounting type | | S-1 14" |
| Insulation | Class | H class |
| Enclosure (according IEC-34-5) | | IP23 |
| Exciter system | | Self-excited, brushless |
| Voltage regulator | | A.V.R. (Electronic) |
| Bracket type | | Single bearing |
| Coupling system | | Flexible disc |
| Coating type | | Standard (Vacuum impregnation) |

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## Application Data

| Exhaust System | | |
|---|---|---|
| Maximum exhaust temperature | ºC | 471 |
| Exhaust Gas Flow | kg/s | 0,4 |
| Maximum allowed back pressure | mbar | 100 |
| Exhaust Flange Size (external diameter) | mm | 140 |
| Heat dissipated by exhaust pipe | KCal/Kwh | 611,57 |

| Necessary Amount Of Air | | |
|---|---|---|
| Intake air flow | $m^3/h$ | 1165,5 |
| Cooling Air Flow | $m^3/s$ | 8,7 |
| Alternator fan air flow | $m^3/s$ | 0,533 |

| Starting System | | |
|---|---|---|
| Starting power | kW | 5,5 |
| Starting power | CV | 7,48 |
| Auxiliary Voltage | Vdc | 24 |

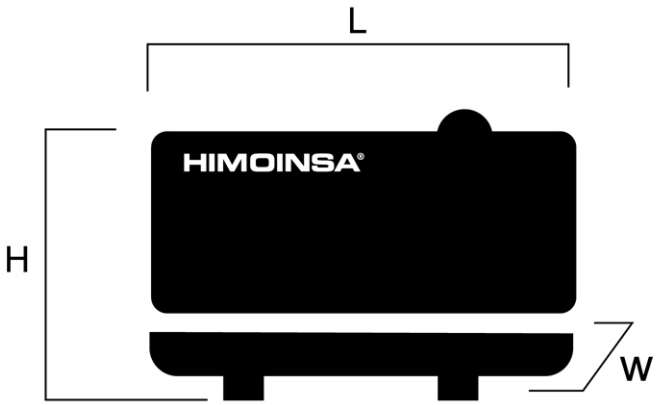
| Fuel System | | |
|---|---|---|
| Fuel Oil Specifications | | Diesel |
| Fuel Tank | L | 449 |
| Other fuel tank capacities | L | 999 |
| Fuel Consumption ESP | l/h | 62,22 |
| Fuel Consumption 100% PRP | l/h | 55,37 |
| Fuel Consumption 70 % PRP | l/h | 38,12 |
| Fuel Consumption 50 % PRP | l/h | 27,97 |



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## Dimensions




| F1 | Weight and Dimensions | | |
|---|---|---|---|
| (L) | Length | mm | 3.800 |
| (H) | Height | mm | 2.250 |
| (W) | Width | mm | 1.400 |
| | Maximum shipping volume | $m^3$ | 11,97 |
| (*) | Weight with liquids in radiator and sump | kg | 3.647 |
| | Fuel tank capacity | L | 449 |
| | Autonomy (70% PRP) | Hours | 12 |
| | Autonomy (100% PRP) | Hours | 8 |
| | Sound pressure level | dB(A)@7m | 68 ± 2,4 |

*(*) (with standard accessories)*

STANDARD VERSION (Steel tank)

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

Local Distributor



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## Dimensions of Other Available Versions

| | Weight and Dimensions | | |
|---|---|---|---|
| (L) | Length | mm | 3.800 |
| (H) | Height | mm | 2.620 |
| (W) | Width | mm | 1.400 |
| | Maximum shipping volume | $m^3$ | 13,94 |
| (*) | Weight with liquids in radiator and sump | kg | 4.149 |
| | Fuel tank capacity | L | 999 |
| | Autonomy (70% PRP) | Hours | 26 |
| | Autonomy (100% PRP) | Hours | 18 |
| | Sound pressure level | dB(A)@7m | 68 ± 2,4 |

*(*) (with standard accessories)*

HIGH CAPACITY VERSION (Steel tank)



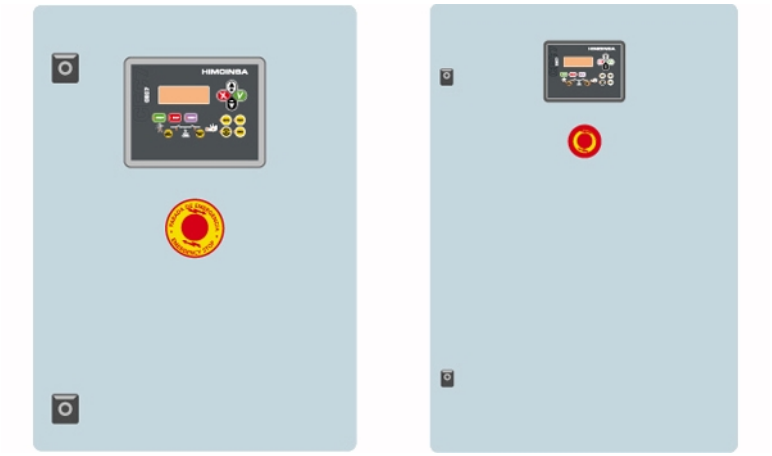
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# CONTROL PANEL MODEL

## *CC2*

*Himoinsa Switching cabinet WITH display. Digital control unit CEC7*



## *M5*

*Control panel with CEM8 Auto-Start controller, thermal-magnetic and earth leakage relay (according to voltage and frequency). Digital control unit CEM 8*



## *AS5*

*Automatic panel WITHOUT transfer switch and WITHOUT mains control with CEM8 unit. (*) AS5 as optional with CEA8 unit. Automatic panel without transfer switch and WITH mains control. Digital control unit CEM8 CEA8*





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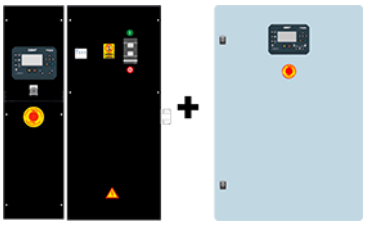
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# CONTROL PANEL MODEL

## *AS5 + CC2*

*Automatic panel WITH transfer switch and with mains control. The display will be on the genset and on the cabinet. Digital control unit CEM8+CEC8*





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# Controller features (I)

• : Standard
x : Not included
• : Optional

| Generator Readings | CEC 7 | CEM 8 |
|---|---|---|
| Voltage between phases | • | • |
| Voltage between neutral and phase | • | • |
| Current intensities | • | • |
| Frequency | • | • |
| Apparent power (Kva) | • | • |
| Active power (Kw) | • | • |
| Reactive power (kVAr) | • | • |
| Power factor | • | • |
| **Mains Readings** | **CEC 7** | **CEM 8** |
| Voltage between phases | • | x |
| Voltage between phases and neutral | • | x |
| Current intensities | • | x |
| Frequency | • | x |
| Apparent power | x | x |
| Active power | x | x |
| Reactive power | x | x |
| Power factor | x | x |
| **Engine Readings** | **CEC 7** | **CEM 8** |
| Coolant temperature | x | • |
| Oil pressure | x | • |
| Fuel level (%) | x | • |
| Battery voltage | x | • |
| R.P.M. | x | • |
| Battery charge alternator voltage | x | • |
| **Engine Protections** | **CEC 7** | **CEM 8** |
| High water temperature | x | • |
| High water temperature by sensor | x | • |
| Low water temperature by sensor | x | • |
| Low oil pressure | x | • |
| Low oil pressure by sensor | x | • |
| Low water level | x | • |
| Unexpected shutdown | x | • |



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# Controller features (II)

• : Standard
x : Not included
• : Optional

| Engine Protections | CEC 7 | CEM 8 |
|---|---|---|
| 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** | **CEC 7** | **CEM 8** |
| High frequency | • | • |
| Low frequency | • | • |
| High voltage | • | • |
| Low voltage | • | • |
| Short-circuit | x | • |
| Asymmetry between phases | • | • |
| Incorrect phase sequence | • | • |
| Inverse power | x | • |
| Overload | x | • |
| Genset signal drop | • | • |
| **Counters** | **CEC 7** | **CEM 8** |
| Total hour counter | • | • |
| Partial hour counter | • | • |
| Kilowatt meter | • | • |
| Starts valid counters | • | |
| Starts failure counters | • | • |
| Maintenance | • | • |
| **Communications** | **CEC 7** | **CEM 8** |
| RS232 | • | x |
| RS485 | • | • |
| Modbus IP | • | • |
| Modbus | • | • |



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# Controller features (III)

• : Standard
x : Not included
• : Optional

| Communications | CEC 7 | CEM 8 |
|---|---|---|
| CCLAN | x | • |
| Software for PC | • | • |
| Analogue modem | • | • |
| GSM/GPRS modem | • | x |
| Remote screen | x | • |
| Tele signal | x | • |
| J1939 | x | • |
| **Features** | **CEC 7** | **CEM 8** |
| Alarm history | • (100) | • |
| External start | • | • |
| Start inhibition | • | • |
| Mains failure start | • | x |
| Start under normative EJP | x | • |
| Pre-heating engine control | x | • |
| Genset contactor activation | • | • |
| Mains & Genset contactor activation | • | x |
| Fuel transfer control | x | • |
| Engine temperature control | x | • |
| Manual override | x | • |
| Programmable alarms | x | • |
| Genset start function in test mode | • | • |
| Programmable outputs | x | • |
| Multilingual | • | • |
| **Special Functions** | **CEC 7** | **CEM 8** |
| GPS Positioning | x | x |
| Synchronisation | x | x |
| Mains synchronization | x | x |
| Second Zero elimination | x | x |
| RAM7 | x | • |
| Remote screen | x | • |



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# Generator set features

## Engine

- Diesel engine
- 4-stroke cycle
- Water-cooled
- 24V electrical system
- Water separator filter (visible level)
- Dry air filter
- Radiator with pusher fan
- Radiator water level sensor
- HTW sender
- LOP sender
- Electronic governor
- Hot parts protection
- Moving parts protection

## Alternator

- Self-excited and self-regulated
- IP23 protection
- H class insulation

## Electrical system

- Electric control and power panel with measurements devices and control unit (according to necessity and configuration)
- Battery Switch
- Adjustable earth leakage protection (time & sensitivity) standard in M5 and AS5, with thermal magnetic protection
- Battery charger (standard on gensets with automatic control panels)
- Heating resistor (standard on sets with automatic control panels)
- Battery charger alternator with ground connection
- Starter battery/ies installed (cables and bracket included)
- Ground connection electrical installation with connection ready for ground spike (not supplied)

## Soundproofed version

- Steel chassis
- Anti-vibration shock absorbers
- Chassis with integrated fuel tank



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# Generator set features

## Soundproofed version

· Fuel level gauge
· External emergency stop switch
· Bodywork made from high quality steel plate
· High mechanical strength
· Low noise emissions level
· Soundproofing provided by high-density volcanic rock wool
· Epoxy polyester powder coating
· Full access for maintenance (water, oil and filters, no need to remove the canopy)
· Reinforced lifting hooks for crane hoisting
· Watertight chassis (acts as a double barrier against liquid retention)
· Fuel tank drain plug
· Chassis drain plug
· Chassis ready for future mobile kit installation
· Steel residential silencer -35db(A) attenuation.
· Oil sump extraction kit
· Versatility to assemble a high capacity chassis with a metallic fuel tank
· IP Protection according to ISO 8528-13:2016

Optional :
· 3 way valve for external fuel supply (available in 1/2" and 3/8" fittings)
· Fuel transfer pump



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## PDF Summary

Created : 19/01/2026 09:17
Author : Himoinsa
Number of pages : 13
Report Type: Data Sheet - Industrial range
Generated by: HIMOINSA Engineering Dept.


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