



# HIMOINSA

MODEL  
**HHW-20 T5**  
 INDUSTRIAL RANGE  
 Standard soundproofing  
 Powered by HIMOINSA



- B10
- WATER-COOLED
- THREE PHASE
- 50 HZ
- NON COMPLYING 97/68/EC
- DIESEL

## Generating Rates



SERVICE		PRP	ESP
Power	kVA	20	22
Power	kW	16	17,2
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.
- 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 8528-1:2018 normative: 1000 mbar, 25°C, 30% relative humidity.

**Prime Power (PRP):**

According to ISO 8528-1:2018, 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 8528-1:2018, 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

G2 class load acceptance in accordance with ISO 8528-5:2013

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## Engine Specifications 1.500 r.p.m.

ENGINE		PRP	ESP
Rated Output	kW	20,3	22,3
Manufacturer		HIMOINSA	
Model		4HD25 NA5	
Engine Type		4-stroke diesel	
Injection Type		Direct	
Aspiration Type		Natural	
Number of cylinders and arrangement		4-L	
Bore and Stroke	mm	90 x 100	
Displacement	L	2,54	
Cooling System		Liquid (water + 50% glycol)	
Lube Oil Specifications		API CF4, SAE 15W40	
Compression Ratio		17,5:1	
Fuel Consumption ESP	l/h	6,2	
Fuel Consumption 100% PRP	l/h	5,6	
Fuel Consumption 75 % PRP	l/h	4,2	
Fuel Consumption 50 % PRP	l/h	3,1	
Fuel Consumption 25 % PRP	l/h	1,7	
Lube oil consumption with full load		0,8 % of fuel consumption	
Total oil capacity including tubes, filters	L	6	
Total coolant capacity	L	10,7	
Heat dissipated by coolant	kW	13,7	
Governor	Type	Electrical	
Air Filter	Type	Dry	

## Generator

Generator		
Manufacturer		MECC ALTE
Poles	No.	4
Connection type (standard)		Star-series
Mounting type		S-4 7,5"
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)



## Application Data

Exhaust System		
Maximum exhaust temperature	°C	550
Exhaust Gas Flow	m <sup>3</sup> /min	4,6
Maximum allowed back pressure	kPa	6,5
Exhaust Flange Size (external diameter)	mm	65
Heat dissipated by exhaust pipe	kW	17,4

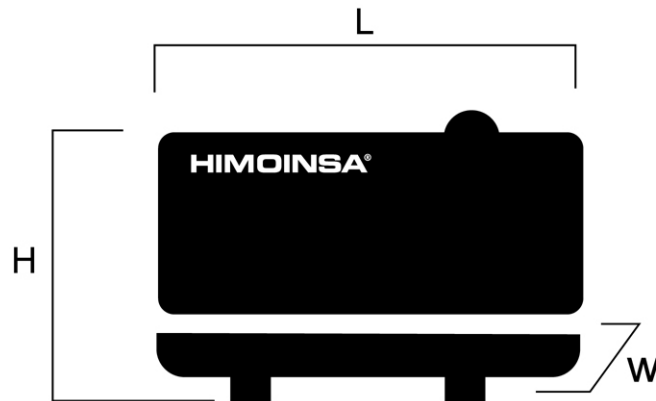
Necessary Amount Of Air		
Intake air flow	m <sup>3</sup> /h	102
Cooling Air Flow	m <sup>3</sup> /s	1,11
Alternator fan air flow	m <sup>3</sup> /s	0,088

Starting System		
Starting power	kW	3,5
Starting power	CV	4,76
Recommended battery	Ah	120
Auxiliary Voltage	Vdc	12

Fuel System		
Fuel Oil Specifications		Diesel
Fuel Tank	L	100
Other fuel tank capacities	L	190, 330



## Dimensions



<b>B10</b> <i>Weight and Dimensions</i>		
(L) Length	mm	2.100
(H) Height	mm	1.350
(W) Width	mm	975
Maximum shipping volume	m <sup>3</sup>	2,76
(*) Weight with liquids in radiator and sump	kg	930
Fuel tank capacity	L	100
Autonomy	Hours	24
Sound pressure level	dB(A)@7m	66 ± 2,4
<i>(*) (with standard accessories)</i>		

STANDARD VERSION (Plastic tank)

Himoinsa 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



## Dimensions of Other Available Versions

<i>Weight and Dimensions</i>		
(L) Length	mm	2.100
(H) Height	mm	1.410
(W) Width	mm	975
Maximum shipping volume	m <sup>3</sup>	2,89
(*) Weight with liquids in radiator and sump	kg	1.017
Fuel tank capacity	L	190
Autonomy	Hours	45
Sound pressure level	dB(A)@7m	66 ± 2,4
(*) (with standard accessories)		

HIGH CAPACITY VERSION (Steel tank)

<i>Weight and Dimensions</i>		
(L) Length	mm	2.100
(H) Height	mm	1.565
(W) Width	mm	975
Maximum shipping volume	m <sup>3</sup>	3,2
(*) Weight with liquids in radiator and sump	kg	1.068
Fuel tank capacity	L	330
Autonomy	Hours	79
Sound pressure level	dB(A)@7m	66 ± 2,4
(*) (with standard accessories)		

HIGH CAPACITY VERSION (Steel tank)

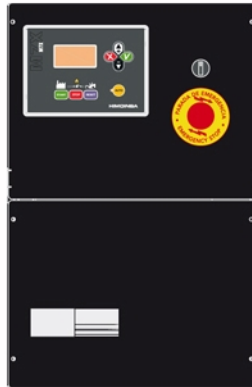


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## CONTROL PANEL MODEL

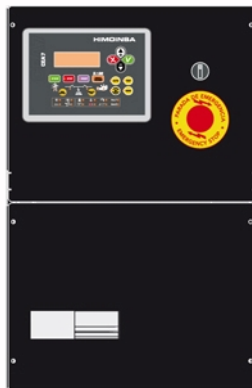
### AS7

Automatic control panel *WITHOUT* Transfer Switch and *WITHOUT* mains control with M7X unit. Digital control unit M7X



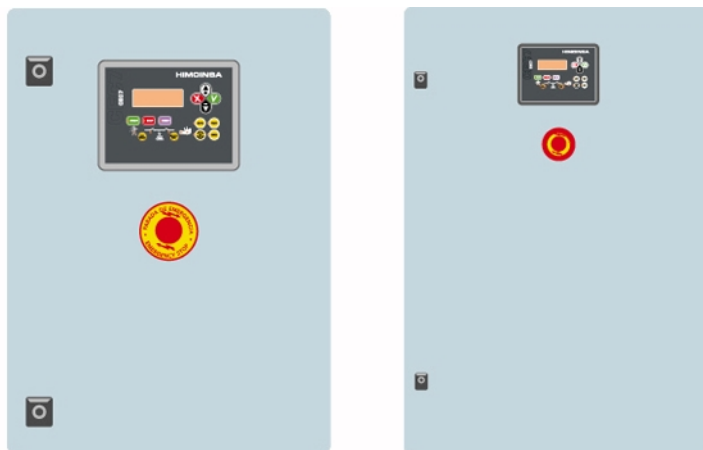
### AS5

AS5 with CEA7 unit. Automatic control panel without transfer switch and *WITH* mains control. Digital control unit CEA7



### CC2

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



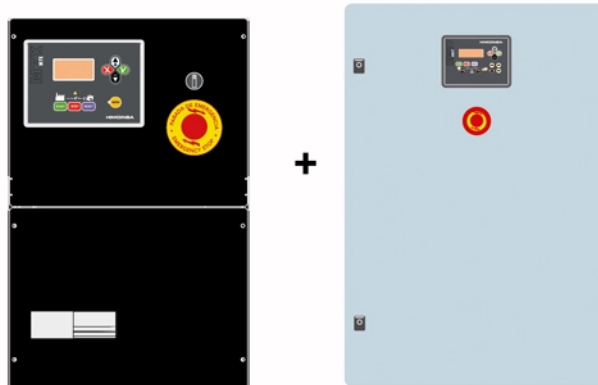


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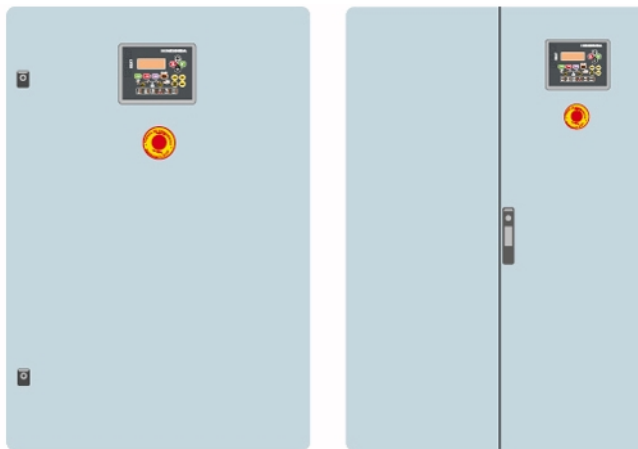
### AS7 + CC2

Automatic control panel WITH transfer switch and WITH mains control. The display will be on the genset and on the cabinet. Digital control unit M7X+CEC7



### AC5

Automatic mains failure control panel. Wall-mounted cabinet WITH transfer switch and thermal magnetic protection (depending on current and voltage). Digital control unit CEA7





## Controller features (I)

- : Standard
- x : Not included
- : Optional

Generator Readings	M7X	CEA 7	CEC 7	M7X+CEC7
Voltage between phases	•	•	•	•
Voltage between neutral and phase	•	•	•	•
Current intensities	•	•	•	•
Frequency	•	•	•	•
Apparent power (Kva)	•	•	•	•
Active power (Kw)	•	•	•	•
Reactive power (kVAr)	•	•	•	•
Power factor	•	•	•	•
Mains Readings	M7X	CEA 7	CEC 7	M7X+CEC7
Voltage between phases	x	•	•	•
Voltage between phases and neutral	x	•	•	•
Current intensities	x	•	•	•
Frequency	x	•	•	•
Apparent power	x	•	x	x
Active power	x	•	x	x
Reactive power	x	•	x	x
Power factor	x	•	x	x
Engine Readings	M7X	CEA 7	CEC 7	M7X+CEC7
Coolant temperature	•	•	x	•
Oil pressure	•	•	x	•
Fuel level (%)	•	•	x	•
Battery voltage	•	•	x	•
R.P.M.	•	•	x	•
Battery charge alternator voltage	•	•	x	•
Engine Protections	M7X	CEA 7	CEC 7	M7X+CEC7
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	•





## Controller features (II)

- : Standard
- x : Not included
- : Optional

Engine Protections	M7X	CEA 7	CEC 7	M7X+CEC7
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	M7X	CEA 7	CEC 7	M7X+CEC7
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	M7X	CEA 7	CEC 7	M7X+CEC7
Total hour counter	•	•	•	•
Partial hour counter	•	•	•	•
Kilowatt meter	•	•	•	•
Starts valid counters	•	•	•	•
Starts failure counters	•	•	•	•
Maintenance	•	•	•	•
Communications	M7X	CEA 7	CEC 7	M7X+CEC7
RS232	x	•	•	•
RS485	x	•	•	•
Modbus IP	x	•	•	•
Modbus	x	•	•	•



## Controller features (III)

- : Standard
- x : Not included
- : Optional

Communications	M7X	CEA 7	CEC 7	M7X+CEC7
CCLAN	x	•	x	x
Software for PC	x	•	•	•
Analogue modem	x	•	•	•
GSM/GPRS modem	x	•	•	•
Remote screen	x	•	x	x
Tele signal	x	• (8 + 4)	x	x
J1939	• M7XJ	•	x	• M7XJ
Features	M7X	CEA 7	CEC 7	M7X+CEC7
Alarm history	• (100)	• (10) / (opc. +100)	• (10) / (opc. +100)	• (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	x	•	•	•
Special Functions	M7X	CEA 7	CEC 7	M7X+CEC7
GPS Positioning	x	•	x	x
Synchronisation	x	•	x	x
Mains synchronization	x	•	x	x
Second Zero elimination	x	•	x	x
RAM7	x	•	x	x
Remote screen	x	•	x	x
Programming timer	x	•	x	x



## Generator set features

### Engine

- Diesel engine
- 4-stroke cycle
- Water-cooled
- 12V electrical system
- Water separator filter (no visible level)
- Dry air filter
- Radiator with blower fan
- HTW sender
- LOP sender
- Electronic governor
- Hot parts protection
- Moving parts protection
- Optional :      · Radiator water level sensor

### 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)
- 4-pole thermal magnetic circuit breaker
- Electrical control panel with earth leakage 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)
- Optional :      · Battery isolator

### Soundproofed version

- Steel chassis
- Anti-vibration shock absorbers



## Generator set features

### Soundproofed version

- Chassis with integrated fuel tank
  - Fuel level gauge
  - Emergency stop button
  - Bodywork made from high quality steel plate
  - High mechanical strength
  - Low level of noise emissions
  - 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 bonnet)
  - 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



## PDF Summary

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Page 1. Genset data

Page 2. Engine Specifications. Generator Specifications.

Page 3. Installation Data

Page 4. Dimensions

Page 5. Dimensions of Other Available Versions

Page 6. Control Panel Model

Page 7. Control Panel Model

Page 8. Controller features (I)

Page 9. Controller features (II)

Page 10. Controller features (III)

Page 11. Generator Features & Options

Page 12. Generator Features & Options

Page 13. PDF Summary

