



# HIMOINSA

# HHW-20 T5

INDUSTRIAL RANGE  
Powered by HIMOINSA



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	



## INDUSTRIAL RANGE

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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**Manufacture facilities:**

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**Subsidiaries:**

PORTUGAL | POLAND | GERMANY | UK | SINGAPORE | UAE | PANAMA |  
DOMINICAN REPUBLIC | ARGENTINA | ANGOLA | SOUTH AFRICA



## STANDARD SOUNDPROOFING



B10



WATER-COOLED



THREE PHASE



50 HZ



NON COMPLYING 97/68/EC



DIESEL

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.

The illustrations and images are indicative and may not coincide in their entirety with the product.

Industrial design under patent.



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## Engine Specifications | 1.500 r.p.m.

Rated Output (PRP)	kW	20,3
Rated Output (ESP)	kW	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



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



## Generator Specifications | MECC ALTE

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)



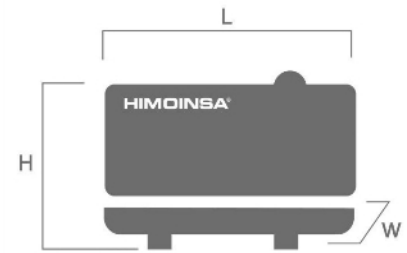
- Self-excited and self-regulated
- IP23 protection
- H class insulation





## WEIGHT AND DIMENSIONS

		Standard Version	High Capacity version	High Capacity version
Length (L)	mm	2.100	2.100	2.100
Height (H)	mm	1.350	1.410	1.565
Width (W)	mm	975	975	975
Maximum shipping volume	m <sup>3</sup>	2,76	2,89	3,2
Weight with liquids in radiator and sump	Kg	930	1017	1068
Fuel tank capacity	L	100	190	330
Autonomy	Hours	24	45	79
Sound pressure level	dB(A)@7m	66 ± 2,4	66 ± 2,4	66 ± 2,4
		Plastic tank	Steel tank	Steel tank



## 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



## Soundproofed version

- Steel chassis
- Anti-vibration shock absorbers
- Chassis with integrated fuel tank
- 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
- 3 way valve for external fuel supply (available in 1/2" and 3/8" fittings) (Opcional).
- Fuel transfer pump (Opcional).





## FEATURES OF THE CONTROL UNITS

	MTX	CEA 7	CEC 7	M7X+CEC7
<b>Generator Readings</b>	Voltage between phases	•	•	•
	Voltage between neutral and phase	•	•	•
	Current intensities	•	•	•
	Frequency	•	•	•
	Apparent power (Kva)	•	•	•
	Active power (Kw)	•	•	•
	Reactive power (kVAr)	•	•	•
	Power factor	•	•	•
<b>Mains Readings</b>	Voltage between phases		•	•
	Voltage between phases and neutral		•	•
	Current intensities		•	•
	Frequency		•	•
	Apparent power		•	
	Active power		•	
	Reactive power		•	
<b>Engine Readings</b>	Coolant temperature	•		•
	Oil pressure	•	•	•
	Fuel level (%)	•	•	•
	Battery voltage	•	•	•
	R.P.M.	•	•	•
	Battery charge alternator voltage	•	•	•
<b>Engine Protections</b>	High water temperature	•	•	•
	High water temperature by sensor	•	•	•
	Low water temperature by sensor	•	•	•
	Low oil pressure	•	•	•
	Low oil pressure by sensor	•	•	•
	Low water level	•	•	•
	Unexpected shutdown	•	•	•
	Fuel storage	•	•	•
	Fuel storage by sensor	•	•	•
	Stop failure	•	•	•
	Battery voltage failure	•	•	•
	Battery charge alternator failure	•	•	•
	Overspeed	•	•	•
	Underspeed	•	•	•
	Start failure	•	•	•
	Emergency stop	•	•	•

• Standard

⊙ Optional



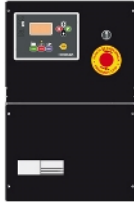
	M7X	CEA 7	CEC 7	M7X+CEC7	
<b>Alternator Protections</b>	High frequency	●	●	●	
	Low frequency	●	●	●	
	High voltage	●	●	●	
	Low voltage	●	●	●	
	Short-circuit	●	●	●	
	Asymmetry between phases	●	●	●	
	Incorrect phase sequence	●	●	●	
	Inverse power	●	●	●	
	Overload	●	●	●	
	Genset signal drop	●	●	●	
<b>Counters</b>	Total hour counter	●	●	●	
	Partial hour counter	●	●	●	
	Kilowatt meter	●	●	●	
	Starts valid counters	●	●	●	
	Starts failure counters	●	●	●	
Maintenance	●	●	●	●	
<b>Communications</b>	RS232		⓪	⓪	
	RS485		⓪	⓪	
	Modbus IP		⓪	⓪	
	Modbus		⓪	⓪	
	CCLAN		⓪		
	Software for PC		⓪	⓪	
	Analogue modem		⓪	⓪	
	GSM/GPRS modem		⓪	⓪	
	Remote screen		⓪		
	Tele signal		⓪ (8 + 4)		
J1939	⓪ M7XJ	⓪		⓪ M7XJ	
<b>Features</b>	Alarm history	● (100)	● (10) / (opc. +100)	● (10) / (opc. +100)	● (100)
	External start	●	●	●	●
	Start inhibition	●	●	●	●
	Mains failure start		●	●	●
	Start under normative EJP	●	●		●
	Pre-heating engine control	●	●		●
	Genset contactor activation	●	●	●	●
	Mains & Genset contactor activation		●	●	●
	Fuel transfer control	●	●		●
	Engine temperature control	●	●		●
	Manual override	●	●		●
	Programmable alarms	●	●		●
	Genset start function in test mode	●	●	●	●
	Programmable outputs	●	●		●
	Multilingual		●	●	●
	<b>Special Functions</b>	GPS Positioning		⓪	
		Synchronisation		⓪	
Mains synchronization			⓪		
Second Zero elimination			⓪		
RAM7			⓪		
Remote screen			⓪		
Programming timer		⓪			

● Standard      ⓪ Optional





## CONTROL PANELS



### 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.

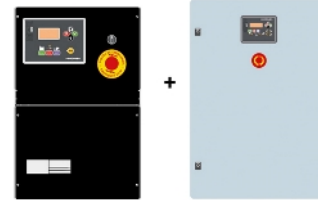
Digital control unit CEA7



### CC2

Himoinsa Switching cabinet WITH display.

Digital control unit CEC7



### 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



## 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)
- Battery Switch (Opcional).

