



SERVICE		PRP	ESP
POWER	kVA	460	508
POWER	kW	368	406
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	



## 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)
- 97/68/EC Emissions of gaseous and particulate pollutants.
- 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

Continuous Power (COP): According to Standard ISO 8528-1:2018, this is the maximum power available for continuous loads for unlimited running hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same.

"Class G2" performance according to the load impact test according to ISO 8528-5:2018

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## STANDARD SOUNDPROOFING



H1



WATER-COOLED



THREE PHASE



50 HZ



STAGE 3A



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.



Engine Specifications | 1.500 r.p.m.

Rated Engine Output (PRP)	kW	392
Rated Engine Output (ESP)	kW	433
Manufacturer	MTU	
Model	10V1600G10F	
Engine Type	4-stroke diesel	
Injection Type	Direct	
Aspiration Type	Turbocharged and after-cooled	
Number of cylinders and arrangement	10-V	
Bore and Stroke	mm	122 x 150
Displacement	L	17,5
Cooling System	Coolant	
Lube Oil Specifications	S10 W40	
Compression Ratio	17,5	

Lube oil consumption with full load	0,5 % of fuel consumption	
Total oil capacity including tubes, filters	L	60,5
Total coolant capacity	L	94
Governor	Type	Electrical
Air Filter	Type	Dry
Inner diameter exhaust pipe	mm	106



- Diesel engine
- 4-stroke cycle
- 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



Generator Specifications | MECC ALTE

Manufacturer	MECC ALTE	
Model	ECO40 3S/4 B	
Poles	No.	4
Connection type (standard)	Star - Parallel	
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)



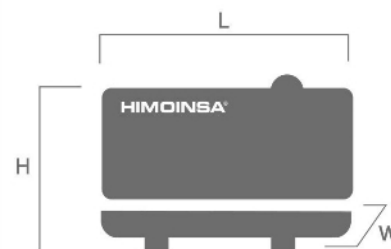
- Self-excited and self-regulated
- IP23 protection
- H class insulation

## WEIGHT AND DIMENSIONS

		Standard Version	High Capacity version
Length (L)	mm	4500	4500
Height (H)	mm	2340	2740
Width (W)	mm	1800	1800
Maximum shipping volume	m <sup>3</sup>	18,95	22,19
Weight with liquids in radiator and sump	Kg	5582	6193
Fuel tank capacity	L	740	2000
Autonomy (70% PRP)	Hours	10	27
Autonomy (100% PRP)	Hours	7	20

Steel tank

Steel tank



## SOUND PRESSURE

Sound pressure level	dB(A)@7m	69 ± 2,4
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## APPLICATION DATA

### EXHAUST SYSTEM

Maximum exhaust temperature	°C	500
Exhaust Gas Flow	m <sup>3</sup> /min	93,6
Maximum allowed back pressure	mbar	150
Exhaust Flange Size (external diameter)	mm	160

### NECESSARY AMOUNT OF AIR

Intake air flow	m <sup>3</sup> /h	2052
Cooling Air Flow	m <sup>3</sup> /s	10,9
Alternator fan air flow	m <sup>3</sup> /s	0,9

### FUEL CONSUMPTION

Fuel Consumption ESP	l/h	108,87
Fuel Consumption 100% PRP	l/h	101,75
Fuel Consumption 70 % PRP	l/h	75,25
Fuel Consumption 50 % PRP	l/h	55,37

### FUEL SYSTEM

Fuel Oil Specifications		Diesel
Fuel Tank	L	740
Other fuel tank capacities	L	2.000

### STARTING SYSTEM

Starting power	kW	8
Starting power	CV	10,88
Recommended battery	Ah	75 x 2
Auxiliary Voltage	Vdc	24
Starter current peak	A	800
Nominal starter current	A	250



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) (Optional).
- Fuel transfer pump (Optional).



## FEATURES OF THE CONTROL UNITS

	CEM 7	CEA 7	CEC 7	CEM7 + 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		•	
	Power factor		•	
<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

	CEM 7	CEA 7	CEC 7	CEM7 + 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	⓪
	RS485	⓪	⓪	⓪
	Modbus IP	⓪	⓪	⓪
	Modbus	⓪	⓪	⓪
	CCLAN	⓪	⓪	⓪
	Software for PC	⓪	⓪	⓪
	Analogue modem	⓪	⓪	⓪
	GSM/GPRS modem	⓪	⓪	⓪
	Remote screen	⓪	⓪	⓪
	Tele signal	⓪ (8 + 4)	⓪ (8 + 4)	⓪ (8 + 4)
	J1939	⓪	⓪	⓪
<b>Features</b>	Alarm history	• (100)	• (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	⓪	⓪
	Synchronisation	⓪	⓪	⓪
	Mains synchronization	⓪	⓪	⓪
	Second Zero elimination	⓪	⓪	⓪
	RAM7	⓪	⓪	⓪
	Remote screen	⓪	⓪	⓪

• Standard

⓪ Optional



## CONTROL PANELS



### M5

Digital manual Auto-Start control panel and thermal magnetic protection (depending on current and voltage) and differential with CEM7.

Digital control unit CEM7



### AS5

Automatic panel WITHOUT transfer switch and WITHOUT mains control with CEM7 unit. (\*) AS5 as optional with CEA7 unit. Automatic panel without transfer switch and WITH mains control.



### CC2

Himoinsa Switching cabinet WITH display.

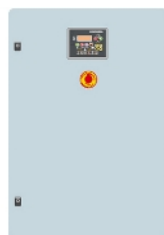
Digital control unit CEC7



### 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 CEM7+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)
- 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)