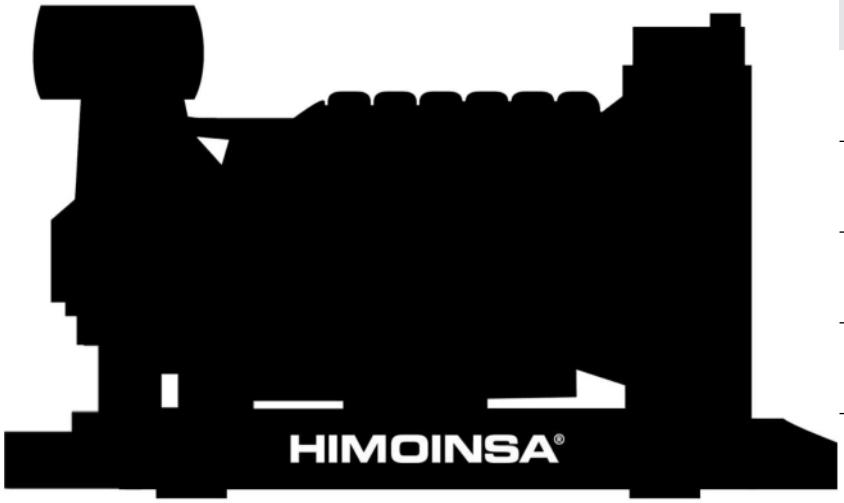
HIMOINSA
A YANMAR COMPANY

HGM-1520 T5 BIO

HEAVY RANGE
Powered by MTU



SERVICE		COP
POWER	kVA	1520
POWER	kW	1520
RATED SPEED	r.p.m.	1.500
STANDARD VOLTAGE	V	400/230
RATED AT POWER FACTOR	Cos Phi	1,0

HEAVY 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. (amended by 2012/46/EU)
- 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.

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.

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

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Manufacture facilities:
SPAIN • FRANCE • INDIA • CHINA • USA • BRAZIL • ARGENTINA

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

OPEN SKID

- OPEN SKID
- WATER-COOLED
- THREE PHASE
- 50 HZ
- BIOGAS

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 Output (COP)	kW	1600
Manufacturer		MTU
Model		16V4000L32
Engine Type		4-stroke Otto Cycle
Injection Type		Carburization
Aspiration Type		Turbocharged and after-cooled
Number of cylinders and arrangement		16-V
Bore and Stroke	mm	170 x 210
Displacement	L	76,3
Cooling System		Coolant
Lube Oil Specifications		SAE 40
Compression Ratio		13,9

Fuel Consumption 100% COP	Nm3/h	730,4
Fuel Consumption 75 % COP	Nm3/h	562,8
Fuel Consumption 50 % COP	Nm3/h	397
Lube oil consumption with full load	g/kWh	0,2
Total oil capacity including tubes, filters	L	285
Governor	Type	Electrical
Air Filter	Type	Dry

- Biogas Engine
- 4-stroke cycle
- Water-cooled
- 24V electrical system
- Dry air filter
- Remote radiator
- HTW sender
- LOP sender
- Electronic governor
- Hot parts protection
- Moving parts protection

Generator Specifications | LEROY SOMER

Manufacturer		LEROY SOMER
Model		LSA 51.2 VL90
Poles	No.	4
Connection type (standard)		Star
Mounting type		S-00 21"
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
- 4 poles
- AVR governor
- IP23 protection
- H class insulation

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WEIGHT AND DIMENSIONS

		Standard Version
Length (L)	mm	9.277
Height (H)	mm	2.775
Width (W)	mm	2.150
Maximum shipping volume	m³	55,35
Weight with liquids in radiator and sump	Kg	17435
Autonomy	Hours	Ask

APPLICATION DATA

EXHAUST SYSTEM

Maximum exhaust temperature	ºC	445
Exhaust Gas Flow	m³/min	102,5
Maximum allowed back pressure	mbar	60

NECESSARY AMOUNT OF AIR

Intake air flow	m³/h	5685
Cooling Air Flow	m³/s	39,78
Alternator fan air flow	m³/s	2,5

STARTING SYSTEM

Starting power	kW	9 x 2
Starting power	CV	12,24 x 2
Auxiliary Voltage	Vdc	24

FUEL SYSTEM

Fuel Oil Specifications		Biogas
Lower heating value (LHV)	kWh/Nm3	5
Composition *		60% Methane and 40% Carbon Dioxide
Fuel supply connection size	mm	125
Fuel supply pressure	mbar	130 - 200

ISO 9001
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Open set version

- Steel chassis
- Emergency stop button
- Anti-vibration shock absorbers
- Steel industrial silencer -15db(A) attenuation
- Steel residential silencer -35db(A) attenuation. (Opcional).

Gas ramp

- Gas filter
- Double solenoid valve
- Gas pressure regulator
- Low pressure switch
- High pressure switch
- Inlet pressure manometer
- Outlet pressure manometer

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FEATURES OF THE CONTROL UNITS

		CEM 7-G	CEA 7-G	CEC 7	CEM 7-G + CEC7
Generator Readings	Voltage between phases	•	•	•	•
	Voltage between neutral and phase	•	•	•	•
	Current intensities	•	•	•	•
	Frequency	•	•	•	•
	Apparent power (Kva)	•	•	•	•
	Active power (Kw)	•	•	•	•
	Reactive power (kVAr)	•	•	•	•
	Power factor	•	•	•	•
	Low feed pressure	•	•	•	•
	Sealing check solenoid valve	•	•		•
Mains Readings	Voltage between phases		•	•	•
	Voltage between phases and neutral		•	•	•
	Current intensities		•	•	•
	Frequency		•	•	•
	Apparent power		•		
	Active power		•		
	Reactive power		•		
	Power factor		•		
Engine Readings	Coolant temperature	•	•		•
	Oil pressure	•	•		•
	Battery voltage	•	•		•
	R.P.M.	•	•		•
	Battery charge alternator voltage	•	•		•
Engine Protections	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	•	•		•
	Stop failure	•	•		•
	Battery voltage failure	•	•		•
	Battery charge alternator failure	•	•		•
	Overspeed	•	•		•
	Underspeed	•	•		•
	Start failure	•	•		•
	Emergency stop	•	•	•	•

• Standard ⓞ Optional

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

● Standard ⓞ Optional

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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)
- 4-pole thermal magnetic circuit breaker
- Battery Switch
- 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)

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