

# **HSW-325 T5**

INDUSTRIAL RANGE **Powered by SCANIA** 



SERVICE		PRP / DCP	ESP	
POWER	kVA	331	362	
POWER	kW	265	290	
RATED SPEED	r.p.m.	1.50	0	
MAIN VOLTAGE	V	400/2	30	
AVAILABLE VOLTAGES	V	200/115 · 2	30 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

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

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

Prime Power (PRP):
According to 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 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

Continuous Power (COP): According to Standard ISO 8528-1:2020, 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.

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



### **OPEN SKID**



K8



WATER-COOLED



THREE PHASE



50 HZ



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) / DCP	kW	283
Rated Engine Output (ESP)	kW	311
Manufacturer		SCANIA
Model		DC9-72A(02-14)
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



- 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



## Generator Specifications | MECC ALTE

Manufacturer		MECC ALTE
Model		ECO38 3L/4 A
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)



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

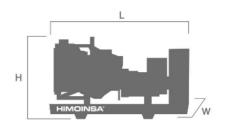






### **WEIGHT AND DIMENSIONS**

		Standard Version
Length (L)	mm	3310
Height (H)	mm	1714
Width (W)	mm	1390
Maximum shipping volume	m³	7,89
Weight with liquids in radiator and sump	Kg	2467
Fuel tank capacity	L	597
Autonomy (70% PRP)	Hours	13
Autonomy (100% PRP)	Hours	9



### **APPLICATION DATA**

### **EXHAUST SYSTEM**

Maximum exhaust temperature	°C	525
Exhaust Gas Flow	kg/s	0,417
Maximum allowed back pressure	mbar	100
Heat dissipated by exhaust pipe	KCal/Kwh	629,85

### **NECESSARY AMOUNT OF AIR**

Intake air flow	m³/h	1216,2
Cooling Air Flow	m³/s	8,5
Alternator fan air flow	m³/s	0,533

### **FUEL CONSUMPTION**

Fuel Consumption ESP	l/h	72,62
Fuel Consumption 100% PRP	l/h	66,2
Fuel Consumption 70 % PRP	l/h	44,52
Fuel Consumption 50 % PRP	l/h	32,09

### **FUEL SYSTEM**

Fuel Oil Specifications		Diesel
Fuel Tank	L	597

### STARTING SYSTEM

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

# $\langle \nabla \rangle$

- Steel chassis
- Emergency stop button
- Oil sump extraction kit
- Anti-vibration shock absorbers
- Chassis with integrated fuel tank
- Fuel level gauge
- Fuel tank drain plug

# Open set version

- Steel industrial silencer -15db(A) attenuation
- Fuel transfer pump (Optional).
- Steel residential silencer -35db(A) attenuation. (Optional).









# FEATURES OF THE CONTROL UNITS

Voltage between phases			CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Current intensities		Voltage between phases	•	•	•	•
Prequency		Voltage between neutral and phase	•	•	•	•
Apparent power (Kva)  Apparent power (Kva)  Reactive power (kVa/r)  Power factor  Voltage between phases  Prequency  Frequency  Active power  Reactive power  Power factor  Coolant temperature  Oil pressure  Power factor  Coolant temperature  Power factor  Fuel level (%)  Battery voltage  R.P.M.  Battery charge alternator voltage  Pigh water temperature  Voltage between phases  Voltage between phases  Notage between phase  Notage b	ø	Current intensities	•	•	•	•
Apparent power (Kva)  Apparent power (Kva)  Reactive power (kVa/r)  Power factor  Voltage between phases  Prequency  Frequency  Active power  Reactive power  Power factor  Coolant temperature  Oil pressure  Power factor  Coolant temperature  Power factor  Fuel level (%)  Battery voltage  R.P.M.  Battery charge alternator voltage  Pigh water temperature  Voltage between phases  Voltage between phases  Notage between phase  Notage b	ding	Frequency	•	•	•	•
Reactive power (kVAr)		Apparent power (Kva)	•	•	•	•
Power factor	ţ	Active power (Kw)	•	•	•	•
Voltage between phases	ners	Reactive power (kVAr)	•	•	•	•
Voltage between phases and neutral  Current intensities Frequency Apparent power  Active power  Reactive power  Power factor  Coolant temperature Oil pressure Ful level (%) Battery voltage R.P.M.  Battery charge alternator voltage  High water temperature by sensor  Low water temperature by sensor  Low water level Unexpected shutdown Ful storage failure  Battery voltage failure  Battery voltage alternator failure  Overspeed Underspeed  Indexpected shutdow  Overspeed Underspeed  Indexpected shutge  Indexpected shutge  Indexpected shutge Indexpected	Ö	Power factor	•	•	•	•
Current intensities		Voltage between phases		•	•	•
Frequency Apparent power Active power Reactive power Power factor Coolant temperature Oil pressure Fuel level (%) Battery voltage R.P.M. Battery charge alternator voltage High water temperature Low water temperature by sensor Low oil pressure by sensor Low oil pressure by sensor Low water level (%)  Fuel level (%) Battery charge alternator woltage High water temperature  High water temperature  High water temperature by sensor Low ater temperature by sensor Low filter by sensor Low filter by sensor Low filter by sensor Battery voltage failure  Fuel storage Fuel storage Fuel storage Fuel storage by sensor Stop failure  Battery voltage failure  Overspeed Underspeed Start failure  Start failure		Voltage between phases and neutral		•	•	•
Apparent power Active power Reactive power Power factor  Coolant temperature Fuel level (%) Battery voltage R.P.M. Battery charge alternator voltage High water temperature High water temperature by sensor Low water temperature by sensor Low oil pressure  Low oil pressure  Unexpected shutdown Fuel storage dailure Fuel storage Fuel		Current intensities		•	•	•
Reactive power   Power factor	m	Frequency		•	•	•
Reactive power   Power factor	ging	Apparent power		•		
Power factor	e e	Active power		•		
Coolant temperature	ins.	Reactive power		•		
Oil pressure	Σ	Power factor		•		
Fuel level (%)		Coolant temperature	•	•		•
Battery voltage R.P.M. Battery charge alternator voltage High water temperature High water temperature by sensor Low water temperature by sensor Low oil pressure Low oil pressure Low oil pressure Low water level Unexpected shutdown Fuel storage Fuel storage Fuel storage Battery voltage failure Battery voltage failure Battery charge alternator failure Overspeed Underspeed Start failure  Start failure	S.	Oil pressure	•	•		•
R.P.M.	ğ	Fuel level (%)	•	•		•
Battery charge alternator voltage  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  Start failure	ã	Battery voltage	•	•		•
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 Fuel storage by sensor Stop failure Battery voltage failure Battery charge alternator failure  Overspeed Underspeed Start failure	gine	R.P.M.	•	•		•
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	<u> </u>	Battery charge alternator voltage	•	•		•
Low water temperature by sensor  Low oil pressure  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		High water temperature	•	•		•
Low oil pressure Low oil pressure by sensor  Low water level Unexpected shutdown Fuel storage Fuel storage Fuel storage by sensor  Stop failure Battery voltage failure Battery charge alternator failure Overspeed Underspeed Start failure  Start failure  • • • • • • • • • • • • • • • • • •		High water temperature by sensor	•	•		•
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  Start failure		Low water temperature by sensor	•	•		•
Low water level Unexpected shutdown Fuel storage Fuel storage Fuel storage by sensor  Stop failure Battery voltage failure Battery charge alternator failure  Overspeed Underspeed Start failure  Start failure		Low oil pressure	•	•		•
Unexpected shutdown  Fuel storage  Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure		Low oil pressure by sensor	•	•		•
Fuel storage Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure		Low water level	•	•		•
Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure		Unexpected shutdown	•	•		•
Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure  Stop failure  Overspeed  Start failure		Fuel storage	•	•		•
Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Battery voltage failure  Overspeed  Start failure  Start failure		Fuel storage by sensor	•	•		•
Battery charge alternator failure  Overspeed  Underspeed  Start failure  Battery charge alternator failure  Start failure		Stop failure	•	•		•
Start failure • • •	ø	Battery voltage failure	•	•		•
Start failure • • •	ţi	Battery charge alternator failure	•	•		•
Start failure • • •	otec		•	•		•
Start failure  Emergency stop  Start failure		Underspeed	•	•		•
Emergency stop		Start failure	•	•		•
	<u></u>	Emergency stop	•	•	•	•

Standard

Optional







		CEM 7	CEA 7	CEC 7	CEM7 + CEC7
	High frequency	• CEM 7	• CLA /	•	• CEM7 1 CEC7
	Low frequency	•	•	•	•
	High voltage	•	•	•	•
	Low voltage	•	•	•	•
20	Short-circuit	•	•		•
otio Ei	Asymmetry between phases	•	•	•	•
or Prote		•	•	•	•
	Incorrect phase sequence	•	•		•
'nat	Inverse power Overload	•	•		•
Alte	Genset signal drop	•	•	•	•
	Total hour counter	•	•	•	•
	Partial hour counter	•	•	•	•
	Kilowatt meter	•	•	•	•
m	Starts valid counters	•	•	•	•
iter	Starts failure counters	•	•	•	•
- CO	Maintenance	•	•	•	•
	RS232		0	<u> </u>	
	RS485				
	Modbus IP				
	Modbus				
	CCLAN				
	Software for PC	0	0		0
		0	0	0	0
ons	Analogue modem	0	0	0	0
Cati	GSM/GPRS modem	0	0	0	0
Ę	Remote screen	(D)	<b>0</b>		(O)
Com	Tele signal	① (8 + 4)	① (8 + 4)		① (8 + 4)
	J1939	<b>(100)</b>	(100)	(100)	<b>(100)</b>
	Alarm history  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	•	•		•
Ires	Genset start function in test mode	•	•	•	•
Featu	Programmable outputs	•	•		•
	Multilingual	•	•	•	•
m	GPS Positioning	0	0		0
ion	Synchronisation				
r r	Mains synchronization				
<u></u>	Second Zero elimination				
pec	RAM7	0	0		0
ທົ	Remote screen	0	0		0

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.

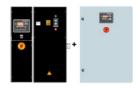




#### CC2

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



### 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

### Electrical system

- Starter battery/ies installed (cables and bracket included)
- Ground connection electrical installation with connection ready for ground spike (not supplied)

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