HIMOINSA
A YANMAR COMPANY

MODEL
HSW-445 T6
INDUSTRIAL RANGE
Standard soundproofing
Powered by SCANIA



- H1
- WATER-COOLED
- THREE PHASE
- 60 HZ
- DIESEL

Generating Rates

SERVICE		PRP / DCP	ESP
Power	kVA	500	546
Power	kW	400	437
Rated Speed	r.p.m.	1.800	
Main voltage	V	480/277	
Available Voltages	V	208/120 - 220/127 - 440/254 - 600/347	
Rated at power factor	Cos Phi	0,8	

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 8528-1:2020 normative: 1000 mbar, 25ºC, 30% relative humidity.

Limited-time running power (LTP):
According to ISO 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 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

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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Engine Specifications 1.800 r.p.m.

ENGINE		PRP / DCP	ESP
Rated Engine Output	kW	428	470
Manufacturer		SCANIA	
Model		DC13-72A(02-13)	
Engine Type		4-stroke diesel	
Injection Type		Direct	
Aspiration Type		Turbocharged and after-cooled	
Number of cylinders and arrangement		6-L	
Bore and Stroke	mm	130 x 160	
Displacement	L	12,7	
Cooling System		Coolant	
Lube Oil Specifications		ACEA E3,E4,E5 or E7	
Compression Ratio		16,3:1	
Lube oil consumption with full load	g/kWh	0,3	
Total oil capacity	L	38	
Total coolant capacity	L	38	
Governor	Type	Electrical	
Air Filter	Type	Dry	
Inner diameter exhaust pipe	mm	90	

Generator

Generator		
Manufacturer		STAMFORD
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)

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Application Data

Exhaust System		
Maximum exhaust temperature	ºC	557
Exhaust Gas Flow	kg/s	0,633
Maximum allowed back pressure	mbar	100
Exhaust Flange Size (external diameter)	mm	160
Heat dissipated by exhaust pipe	KCal/Kwh	632,65

Necessary Amount Of Air		
Intake air flow	m^3/h	1800
Cooling Air Flow	m^3/s	11,67
Alternator fan air flow	m^3/s	0,92

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

Fuel System		
Fuel Oil Specifications		Diesel
Fuel Tank	L	740
Other fuel tank capacities	L	2.000
Fuel Consumption ESP	l/h	112,69
Fuel Consumption 100% PRP	l/h	100,9
Fuel Consumption 70 % PRP	l/h	67,89
Fuel Consumption 50 % PRP	l/h	49,16

ISO 9001 SYSTEM CERTIFICATION
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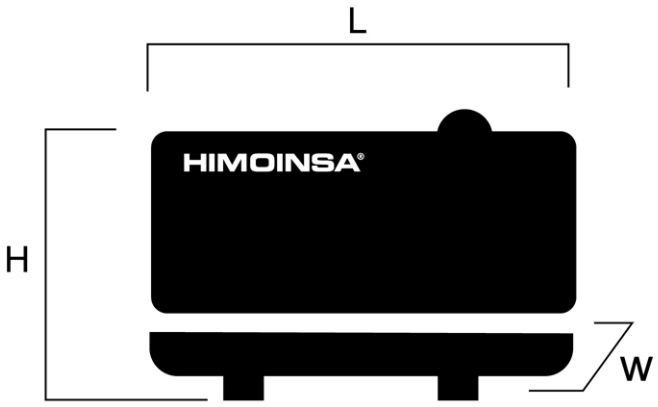
Dimensions



H1	Weight and Dimensions		
(L)	Length	mm	4.500
(H)	Height	mm	2.340
(W)	Width	mm	1.800
	Maximum shipping volume	m^3	18,95
(*)	Weight with liquids in radiator and sump	kg	4.524
	Fuel tank capacity	L	740
	Autonomy (70% PRP)	Hours	11
	Autonomy (100% PRP)	Hours	7
	Sound pressure level	dB(A)@7m	78 ± 2,4

(*) (with standard accessories)

STANDARD VERSION (Steel tank)

Himoinsa China 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

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Dimensions of Other Available Versions

	Weight and Dimensions		
(L)	Length	mm	4.500
(H)	Height	mm	2.740
(W)	Width	mm	1.800
	Maximum shipping volume	m^3	22,19
(*)	Weight with liquids in radiator and sump	kg	5.135
	Fuel tank capacity	L	2.000,0
	Autonomy (70% PRP)	Hours	29
	Autonomy (100% PRP)	Hours	20
	Sound pressure level	dB(A)@7m	78 ± 2,4

(*) (with standard accessories)

HIGH CAPACITY VERSION (Steel tank)

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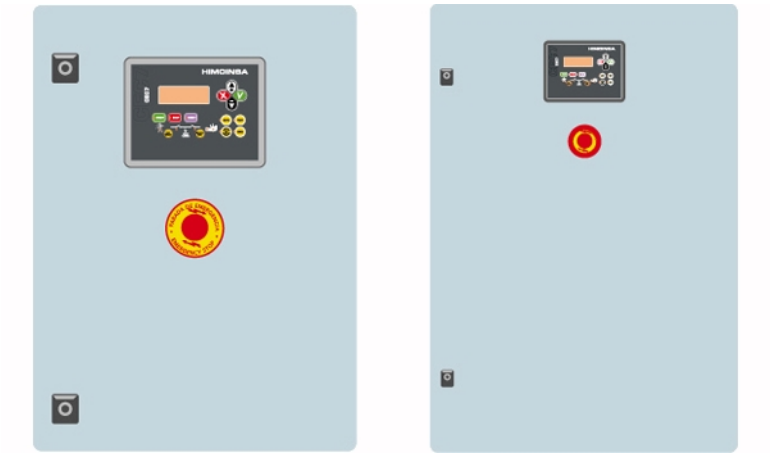
CONTROL PANEL MODEL

CC2

Himoinsa Switching cabinet WITH display. Digital control unit CEC7



M5

Control panel with CEM8 Auto-Start controller, thermal-magnetic and earth leakage relay (according to voltage and frequency). Digital control unit CEM 8



AS5

Automatic panel WITHOUT transfer switch and WITHOUT mains control with CEM8 unit. (*) AS5 as optional with CEA8 unit. Automatic panel without transfer switch and WITH mains control. Digital control unit CEM8 CEA8



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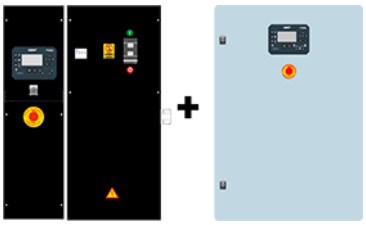
CONTROL PANEL MODEL

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 CEM8+CEC8



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Controller features (I)

• : Standard
x : Not included
• : Optional

Generator Readings	CEC 7	CEM 8
Voltage between phases	•	•
Voltage between neutral and phase	•	•
Current intensities	•	•
Frequency	•	•
Apparent power (Kva)	•	•
Active power (Kw)	•	•
Reactive power (kVAr)	•	•
Power factor	•	•
Mains Readings	**CEC 7**	**CEM 8**
Voltage between phases	•	x
Voltage between phases and neutral	•	x
Current intensities	•	x
Frequency	•	x
Apparent power	x	x
Active power	x	x
Reactive power	x	x
Power factor	x	x
Engine Readings	**CEC 7**	**CEM 8**
Coolant temperature	x	•
Oil pressure	x	•
Fuel level (%)	x	•
Battery voltage	x	•
R.P.M.	x	•
Battery charge alternator voltage	x	•
Engine Protections	**CEC 7**	**CEM 8**
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	•

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Controller features (II)

• : Standard
x : Not included
• : Optional

Engine Protections	CEC 7	CEM 8
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	**CEC 7**	**CEM 8**
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	**CEC 7**	**CEM 8**
Total hour counter	•	•
Partial hour counter	•	•
Kilowatt meter	•	•
Starts valid counters	•	
Starts failure counters	•	•
Maintenance	•	•
Communications	**CEC 7**	**CEM 8**
RS232	•	x
RS485	•	•
Modbus IP	•	•
Modbus	•	•

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Controller features (III)

• : Standard
x : Not included
• : Optional

Communications	CEC 7	CEM 8
CCLAN	x	•
Software for PC	•	•
Analogue modem	•	•
GSM/GPRS modem	•	x
Remote screen	x	•
Tele signal	x	•
J1939	x	•
Features	**CEC 7**	**CEM 8**
Alarm history	• (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	•	•
Special Functions	**CEC 7**	**CEM 8**
GPS Positioning	x	x
Synchronisation	x	x
Mains synchronization	x	x
Second Zero elimination	x	x
RAM7	x	•
Remote screen	x	•

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Generator set features

Engine

- 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

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)
- 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)

Soundproofed version

- Steel chassis
- Anti-vibration shock absorbers
- Chassis with integrated fuel tank

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Generator set features

Soundproofed version

· 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

Optional :
· 3 way valve for external fuel supply (available in 1/2" and 3/8" fittings)
· Fuel transfer pump

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PDF Summary

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