



MODEL  
**HSY-90 T5**  
 HS | STATIONARY RANGE  
 Standard soundproofing  
 Powered by YANMAR

-  HS40
-  WATER-COOLED
-  THREE PHASE
-  50 HZ
-  DIESEL

## Generating Rates



SERVICE		PRP	ESP
Power	kVA	83	90
Power	kW	66	72
Rated Speed	r.p.m.	1.500	
Standard Voltage	V	400/230	
Available Voltages	V	230/115 - 380/220 - 415/240	

01

**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 8528-5:2018

**HIMOINSA HEADQUARTERS:**

Fábrica: Ctra. Murcia - San Javier, Km. 23,6 | 30730 SAN JAVIER (Murcia) Spain

Tel.+34 968 19 11 28 Fax +34 968 19 12 17 Fax +34 968 19 04 20 | info@himoinsa.com | www.himoinsa.com

**Manufacture facilities:**

SPAIN • FRANCE • INDIA • CHINA • USA • BRAZIL • ARGENTINA

**Subsidiaries:**

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



HIMOINSA CHINA CO. LTD - TLF. +86 519 8622 66 88 | FAX: +86 519 86 22 66 87 | E-mail: china@asia.himoinsa.com  
 Nº 10 FENGMING ROAD, SOUTH PART OF WUJIN, HI-TECH INDUSTRIAL DEVELOPMENT ZONE  
 CHANGZHOU 213164 JIANGSU PROVINCE P.R. CHINA

## Engine Specifications 1.500 r.p.m.

ENGINE		PRP	ESP
Rated Output	kW	73,3	80,7
Manufacturer		YANMAR	
Model		4F104SM3.GL	
Engine Type		4-stroke diesel	
Injection Type		Direct	
Aspiration Type		Turbocharged	
Number of cylinders and arrangement		4-L	
Bore and Stroke	mm	104 x 132	
Displacement	L	4,5	
Cooling System		Liquid (water + 50% glycol)	
Lube Oil Specifications		ACEA E3 - E5	
Compression Ratio		17,5:1	
Fuel Consumption ESP	l/h	21,2	
Fuel Consumption 100% PRP	l/h	19,4	
Fuel Consumption 80 % PRP	l/h	15,4	
Fuel Consumption 50 % PRP	l/h	9,6	
Lube oil consumption with full load		0,5 % of fuel consumption	
Total oil capacity including tubes, filters	L	12,8	
Total coolant capacity	L	18,5	
Governor	Type	Mechanical	
Air Filter	Type	Dry	
Inner diameter exhaust pipe	mm	70,3	

## Generator

Generator		
Manufacturer		STAMFORD
Poles	No.	4
Connection type (standard)		Star-series
Mounting type		S-3 11"1/2
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)

## Application Data

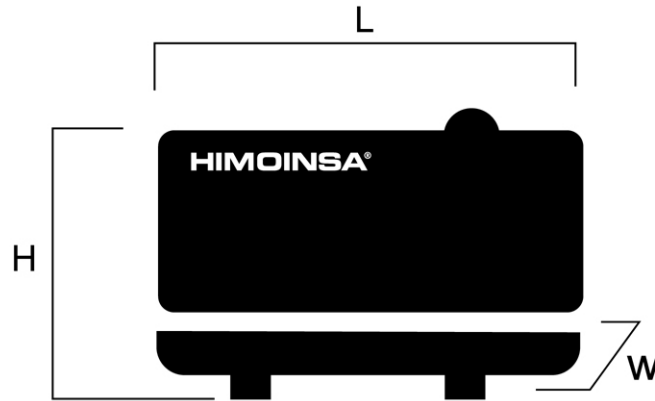
Exhaust System		
Maximum exhaust temperature	°C	516
Maximum allowed back pressure	kPa	5
Heat dissipated by exhaust pipe	KCal/Kwh	543

Necessary Amount Of Air		
Intake air flow	m <sup>3</sup> /h	273
Cooling Air Flow	m <sup>3</sup> /s	2,2
Alternator fan air flow	m <sup>3</sup> /s	0,216

Starting System		
Starting power	kW	3
Starting power	CV	4,08
Auxiliary Voltage	Vdc	12

Fuel System		
Fuel Oil Specifications		Diesel
Fuel Tank	L	195

## Dimensions



HS40

### Weight and Dimensions

(L) Length	mm	2.600
(H) Height	mm	1.500
(W) Width	mm	910
Maximum shipping volume	m <sup>3</sup>	3,55
(*) Weight with liquids in radiator and sump	kg	1.195
Fuel tank capacity	L	195
Autonomy	Hours	13
Sound pressure level	dB(A)@7m	69 ± 2,4
Sound pressure level with attenuation system	dB(A)@7m	66 ± 2,4

(\*) (with standard accessories)

STANDARD VERSION (Steel tank)

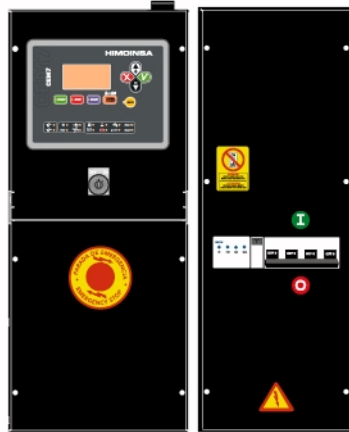
Himoinsa China has the right to modify any feature without prior notice.  
 Weights and dimensions based on standard products. Illustrations may include optional equipment.  
 Technical data described in this catalogue correspond to the available information at the moment of printing.  
 Industrial design under patent.

Local Distributor

## CONTROL PANEL MODEL

### 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.



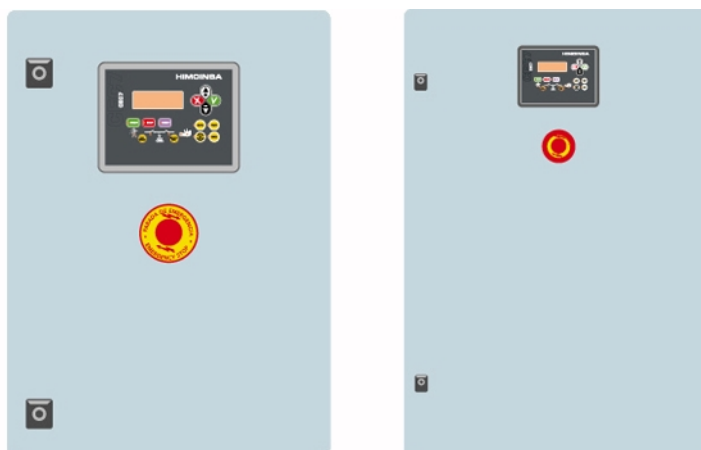
### AS7

Automatic control panel *WITHOUT* Transfer Switch and *WITHOUT* mains control with M7X unit. Digital control unit M7X



### CC2

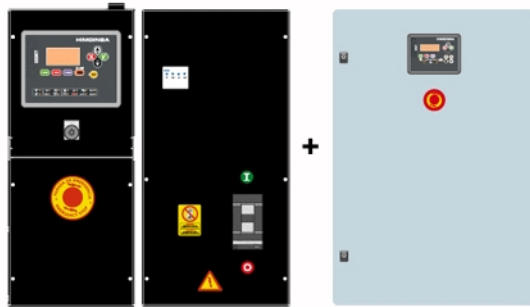
Himoinsa Switching cabinet *WITH* display. Digital control unit CEC7



## 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 CEM7+CEC7



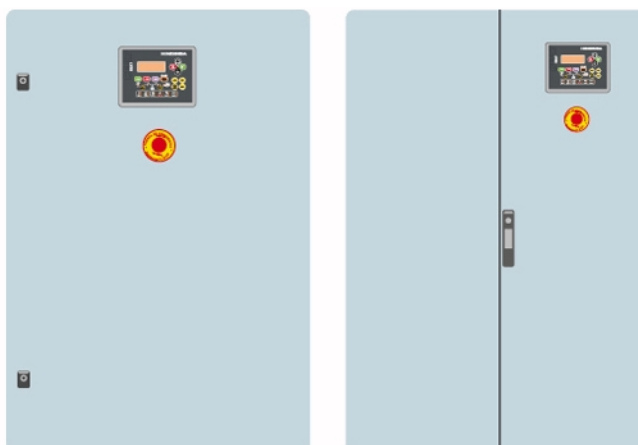
### AS7 + CC2

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



## Controller features (I)

- : Standard
- x : Not included
- : Optional

Generator Readings	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
Voltage between phases	•	•	•	•	•
Voltage between neutral and phase	•	•	•	•	•
Current intensities	•	•	•	•	•
Frequency	•	•	•	•	•
Apparent power (Kva)	•	•	•	•	•
Active power (Kw)	•	•	•	•	•
Reactive power (kVAr)	•	•	•	•	•
Power factor	•	•	•	•	•
Mains Readings	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
Voltage between phases	x	x	•	•	•
Voltage between phases and neutral	x	x	•	•	•
Current intensities	x	x	•	•	•
Frequency	x	x	•	•	•
Apparent power	x	x	•	x	x
Active power	x	x	•	x	x
Reactive power	x	x	•	x	x
Power factor	x	x	•	x	x
Engine Readings	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
Coolant temperature	•	•	•	x	•
Oil pressure	•	•	•	x	•
Fuel level (%)	•	•	•	x	•
Battery voltage	•	•	•	x	•
R.P.M.	•	•	•	x	•
Battery charge alternator voltage	•	•	•	x	•
Engine Protections	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
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	•

## Controller features (II)

- : Standard
- x : Not included
- : Optional

Engine Protections	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
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	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
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	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
Total hour counter	•	•	•	•	•
Partial hour counter	•	•	•	•	•
Kilowatt meter	•	•	•	•	•
Starts valid counters	•	•	•	•	•
Starts failure counters	•	•	•	•	•
Maintenance	•	•	•	•	•
Communications	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
RS232	x	•	•	•	•
RS485	x	•	•	•	•
Modbus IP	x	•	•	•	•
Modbus	x	•	•	•	•



## Controller features (III)

- : Standard
- x : Not included
- : Optional

Communications	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
CCLAN	x	•	•	x	x
Software for PC	x	•	•	•	•
Analogue modem	x	•	•	•	•
GSM/GPRS modem	x	•	•	•	•
Remote screen	x	•	•	x	x
Tele signal	x	• (8 + 4)	• (8 + 4)	x	x
J1939	• M7XJ	•	•	x	• M7XJ
Features	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
Alarm history	• (100)	• (10) / (opc. +100)	• (10) / (opc. +100)	• (10) / (opc. +100)	• (100)
External start	•	•	•	•	•
Start inhibition	•	•	•	•	•
Mains failure start	x	x	•	•	•
Start under normative EJP	•	•	•	x	•
Pre-heating engine control	•	•	•	x	•
Genset contactor activation	•	•	•	•	•
Mains & Genset contactor activation	x	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	x	•	•	•	•
Special Functions	M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
GPS Positioning	x	•	•	x	x
Synchronisation	x	•	•	x	x
Mains synchronization	x	•	•	x	x
Second Zero elimination	x	•	•	x	x
RAM7	x	•	•	x	x
Remote screen	x	•	•	x	x

## Generator set features

### Engine

- Diesel engine
- 4-stroke cycle
- Water-cooled
- 12V electrical system
- Dry air filter
- Radiator with pusher fan
- Mechanical 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)
  - 4-pole thermal magnetic circuit breaker
  - Adjustable 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)
- Optional :
- Battery Switch
  - Leakage detector
  - Optional Battery (Optima)

### Soundproofed version

- Steel chassis
- Lower power cable outlet with aluminum cover
- Side auxiliary cable outlet with aluminum cover
- Modular tank and retention tray system. Allows easy removal and / or maintenance of the equipment

## Generator set features

### Soundproofed version

- Wide access to the engine compartment because of a removable door
  - Fuel tank in retention tray
  - Soundproofing with foam and polyurethane film
  - 4 side lifting points
  - Anti-vibration shock absorbers
  - Fuel tank
  - Fuel level gauge
  - External emergency stop switch
  - Bodywork made from high quality steel plate
  - High mechanical strength
  - Epoxy polyester powder coating
  - Full access for maintenance (water, oil and filters, no need to remove the canopy)
  - Versatility to assemble a high capacity chassis with a metallic fuel tank
  - IP Protection according to ISO 8528-13:2016
- Optional :
- Manual oil extraction pump
  - Noise reduction kit
  - Fuel transfer pump

## PDF Summary

Created : 14/02/2022 11:44  
Author : Himoinsa  
Number of pages : 12  
Report Type: Data Sheet - Hs | stationary range  
Generated by: HIMOINSA Engineering Dept.  
Page 1. Genset data  
Page 2. Engine Specifications. Generator Specifications.  
Page 3. Installation Data  
Page 4. Dimensions  
Page 5. Control Panel Model  
Page 6. Control Panel Model  
Page 7. Controller features (I)  
Page 8. Controller features (II)  
Page 9. Controller features (III)  
Page 10. Generator Features & Options  
Page 11. Generator Features & Options  
Page 12. PDF Summary

