

# HSF-110 T5

HS | STATIONARY RANGE Powered by FPT IVECO



SERVICE		PRP	ESP
POWER	kVA	100	110
POWER	kW	80	88
RATED SPEED	r.p.m.	1.5	500
MAIN VOLTAGE	V	400	/230
AVAILABLE VOLTAGES	V	230 V (t) · 415	380/220 · /240
RATED AT POWER FACTOR	Cos Phi	0	,8



## HS | STATIONARY 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
- 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 8528-1:2020 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.

 $^{\circ}\text{Class G2}^{\circ}$  performance according to the load impact test according to ISO 8528-5:2020

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Subsidiaries:
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DOMINICAN REPUBLIC | ARGENTINA | ANGOLA | SOUTH AFRICA | MOROCOO



#### STANDARD SOUNDPROOFING

HS50 HS52

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 (COP)	kW	71,9
Rated Engine Output (PRP)	kW	89,9
Rated Engine Output (ESP)	kW	98,9
Manufacturer		FPT_IVECO
Model		N45.TE2P
Engine Type		4-stroke diesel
Injection Type		Direct, common rail
Aspiration Type		Turbocharged and after-cooled
Number of cylinders and arrangement		4-L
Bore and Stroke	mm	104 x 132
Displacement	L	4,5
Cooling System		Coolant
Lube Oil Specifications		SAE 15W40-CLASS T2; ACEA E7/04
Compression Ratio		17,5:1

Lube oil consumption with full load		0,1 % of fuel consumption
Total oil capacity including tubes, filters	L	12,8
Total coolant capacity	L	18,5
Governor	Type	Electrical
Air Filter	Type	Dry



- 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



# Generator Specifications | MECC ALTE

Manufacturer		MECC ALTE
Model		ECP34.2S4C
Poles	No.	4
Connection type (standard)		Star-series
Mounting type		S-3 11"1/2
Insulation	Class	H class

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

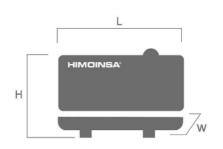






## **WEIGHT AND DIMENSIONS**

		Standard Version	Optional version	Optional version
Length (L)	mm	2900	2900	2900
Height (H)	mm	1780	1860	2030
Width (W)	mm	1100	1100	1100
Maximum shipping volume	m³	5,68	5,93	6,48
Weight with liquids in radiator and sump	Kg	Ask	Ask	Ask
Weight with liquids in sump	Kg	1521	Ask	Ask
Fuel tank capacity	L	310	485	890
Autonomy (70% PRP)	Hours	20	31	57
Autonomy (100% PRP)	Hours	14	22	41
		Steel tank	Steel tank	Steel tank



## **SOUND PRESSURE**

Sound pressure level	dB(A)@7m	$69 \pm 2,4$
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### **APPLICATION DATA**

#### **EXHAUST SYSTEM**

Maximum allowed back pressure	kPa	10
Exhaust Flange Size (external diameter)	mm	90
Heat dissipated by exhaust pipe	KCal/Kwh	608

#### **NECESSARY AMOUNT OF AIR**

Alternator fan air flow	m³/s	0,487

#### **FUEL CONSUMPTION**

Fuel Consumption ESP	l/h	23,57
Fuel Consumption 100% PRP	l/h	21,68
Fuel Consumption 70 % PRP	l/h	15,66
Fuel Consumption 50 % PRP	l/h	11,58

#### **FUEL SYSTEM**

Fuel Oil Specifications		Diesel
Fuel Tank	L	310
Other fuel tank capacities	L	485, 890

#### STARTING SYSTEM

Recommended battery	Ah	44	
Auxiliary Voltage	Vdc	12	



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
- 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)
- Fuel transfer pump
- Versatility to assemble a high capacity chassis with a metallic fuel tank
- IP Protection according to ISO 8528-13:2016
- Manual oil extraction pump (Optional).
- Noise reduction kit (Optional).





# FEATURES OF THE CONTROL UNITS

		M7X	CEM 7	CEA 7	CEC 7	M7X+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	•	•	•	•	•
	Voltage between phases			•	•	•
	Voltage between phases and neutral			•	•	•
	Current intensities			•	•	•
ø	Frequency			•	•	•
Readings	Apparent power			•		
E E	Active power			•		
Mains	Reactive power			•		
	Power factor			•		
	Coolant temperature	•	•	•		•
S.	Oil pressure	•	•	•		•
adings	Fuel level (%)	•	•	•		•
ä	Battery voltage	•	•	•		•
gine	R.P.M.	•	•	•		•
- E	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	•	•	•		•
ø	Low water level	•	•	•		•
	Unexpected shutdown	•	•	•		•
	Fuel storage	•	•	•		•
	Fuel storage by sensor	•	•	•		•
	Stop failure	•	•	•		•
	Battery voltage failure	•	•	•		•
či o	Battery charge alternator failure	•	•	•		•
Engine Protections	Overspeed	•	•	•		•
	Underspeed	•	•	•		•
	Start failure	•	•	•		•
	Emergency stop	•	•	•	•	•

Standard

Optional







		M7X	CEM 7	CEA 7	CEC 7	M7X+CEC7
	High fragues as					
	High frequency	•	•	•	•	•
	Low frequency	•	•	•	•	•
	High voltage	•	•	•	•	•
õ	Low voltage	•	•	•	•	•
ξ	Short-circuit	•	•	•		•
otec	Asymmetry between phases	•	•	•	•	•
ŗ	Incorrect phase sequence	•	•	•	•	•
ator	Inverse power	•	•	•		•
5 5 5	Overload	•	•	•		•
<u>₹</u>	Genset signal drop	•	•	•	•	•
	Total hour counter	•	•	•	•	•
	Partial hour counter	•	•	•	•	•
	Kilowatt meter	•	•	•	•	•
ā	Starts valid counters	•	•	•	•	•
unte	Starts failure counters	•	•	•	•	•
ច័	Maintenance	•	•	•	•	•
	RS232		0	0	0	0
	RS485		0	0	0	0
	Modbus IP		0	0	0	0
	Modbus		0	<b>o</b>	0	<u> </u>
	CCLAN		0	0		
	Software for PC		0	0	0	0
	Analogue modem		0	0	0	0
Ë	GSM/GPRS modem		0	0		0
icat	Remote screen		0			
Ē	Tele signal		① (8 + 4)	① (8 + 4)		
Ë	J1939	<b>◎ M7XJ</b>	(8 + 4) (0	<u> </u>		● M7XJ
	Alarm history	(100)	(100)	(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	•	•	•		•
és	Genset start function in test mode	•	•	•	•	•
atur	Programmable outputs	•	•	•		•
Ů.	Multilingual		•	•	•	•
	GPS Positioning		0	0		
Sus	Synchronisation			-		
Jotic	Mains synchronization					
Ţ	Second Zero elimination					
ecial	RAM7		0	0		
Sp	Remote screen		0	0		

Standard

Optional



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## CONTROL **PANELS**



#### 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

Digital control unit M7X





#### CC2

Himoinsa Switching cabinet WITH display.

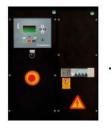
Digital control unit CEC7



# 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





# 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



#### Electric control and power panel with measurements devices and control unit (according to necessity and configuration)

- · Adjustable earth leakage protection
- Battery charger (standard on gensets with automatic control
- 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)

## Electrical system

- Battery Switch (Optional).
- Leakage detector (Optional).
- Optional Battery (Optima) (Optional).

