HIMOINSA®
THE ENERGY

MODEL
HFW-180 T5
INDUSTRIAL RANGE
Open Skid
Powered by FPT_IVECO

- K6
- WATER-COOLED
- THREE PHASE
- 50 HZ
- STAGE 3A
- DIESEL

Generating Rates

SERVICE		PRP	STANDBY
Power	kVA	173	190
Power	kW	139	152
Rated Speed	r.p.m.	1.500	
Standard Voltage	V	400	
Available Voltages	V	230 - 230/132 - 400/230 V	
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.
- 2006/95/EC Low voltage.
- 2004/108/CE Electromagnetic compatibility.
- 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 2002/88/EC & 2004/26/EC)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2005 normative: 1000 mbar, 25ºC, 30% relative humidity.

Prime Power (PRP):
According to ISO 8528-1:2005, 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 8528-1:2005, 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

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Manufacture facilities:
SPAIN • FRANCE • INDIA • CHINA • USA • BRASIL

Subsidiaries:
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Engine Specifications 1.500 r.p.m.

ENGINE		PRP	STANDBY
Rated Output	kW	150	165
Manufacturer		FPT_IVECO	
Model		N67 TE2F	
Engine Type		Diesel 4 strokes-cycle	
Injection Type		Direct. Common rail	
Aspiration Type		Turbocharged and aftercooled	
Ciylinders Arrangement		6 - L	
Bore and Stroke	mm	104 x 132	
Displacement	L	6,7	
Cooling System		Liquid (water + 50% glycol)	
Lube Oil Specifications		ACEA E3 - E5	
Compression Ratio		17,5:1	
Fuel Consumption StandBy	l/h	44	
Fuel Consumption 100% PRP	l/h	39,6	
Fuel Consumption 80 % PRP	l/h	32,7	
Fuel Consumption 50 % PRP	l/h	24,2	
Lube Oil Consumption Full Load		0,1 % of fuel consumption	
Total oil capacity including tubes, filters	L	17	
Total Coolant Capacity	L	25,5	
Governor	Type	Electrical	
Air Filter	Type	Dry	

Generator

Generator		
Poles	Num	4
Winding Conections (standard)		Star-serie
Frame Mounting		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)
Bearing		Single bearing
Coupling		Flexible disc
Coating type		Standar (Vacuum impregnation)

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Application Data

Exhaust System		
Maximum exhaust temperature	ºC	610
Maximum allowed back pressure	kPa	6
Heat evacuated through exhaut pipe	KCal/Kwh	614

Air Inlet System		
Intake Air Flow	m3/h	652
Cooling Air Flow	m3/s	3,8
Alternator fan air flow	m3/s	0,514

Starting System		
Starting Motor	kW	3
Starting Motor	CV	4,08
Recommended Battery Capacity	Ah	180
Auxiliary Voltage	Vcc	12

Fuel System		
Fuel Oil Specifications		Diesel
Fuel Tank	L	250

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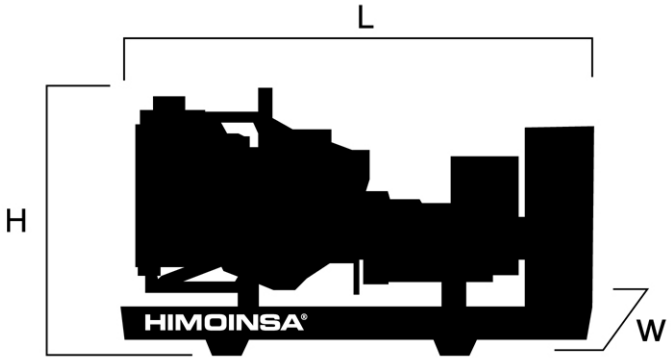
Dimensions



K6 Weight and Dimensions		
(L) Length	mm	2.900
(H) Height	mm	1.595
(W) Width	mm	900
Shipping Volume seaworthy (standard suplier)	m3	4,16
(*) Wet weight	Kg	1.474
Fuel tank capacity	L	250,0
Autonomy	Hours	8

(*) (with standard accesories)

STANDARD VERSION

Local Distributor

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CONTROL PANEL MODEL

M5

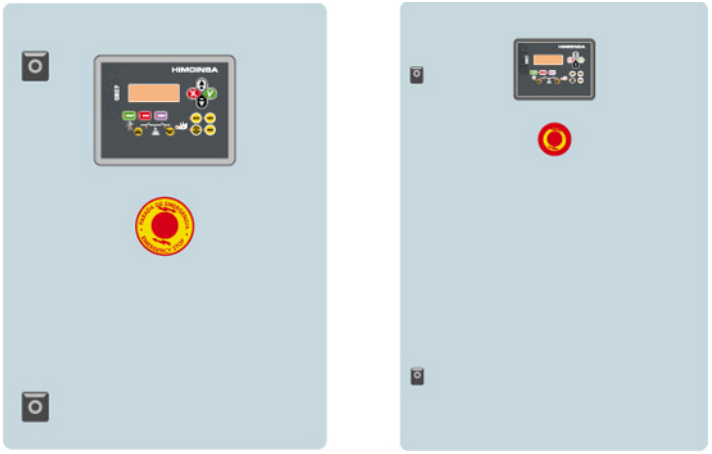
Digital manual auto-start control panel and thermal magnetic protection (according to voltage and phase) and differential relay. CEM7

AS5

Automatic control panel WITHOUT ATS (Automatic Transfer Switch) and WITHOUT mains control with CEM7. (*) As optional AS5 with CEA7. Automatic control panel without ATS (automatic transfer switch) and with mains control.

CC2

Himoinsa External ATS WITH visualization display. CEC7



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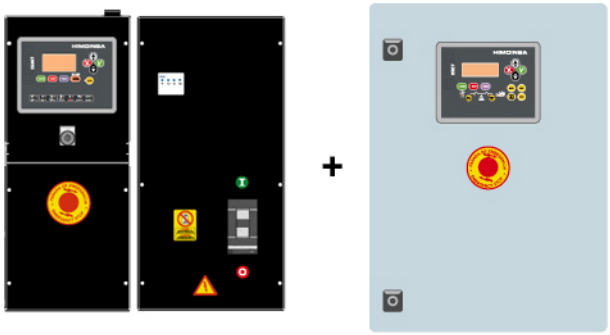
CONTROL PANEL MODEL

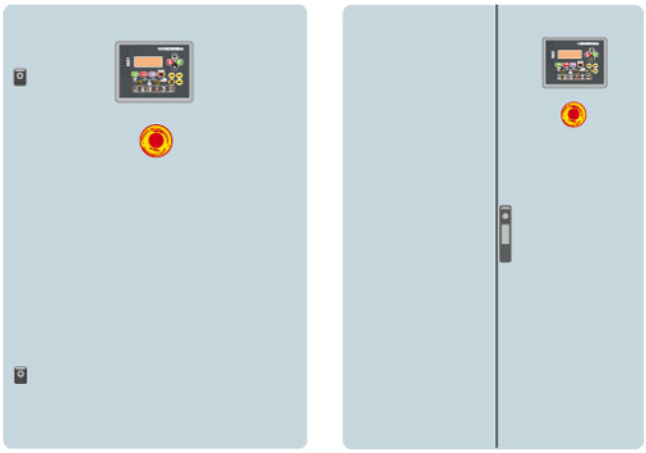
AS5 + CC2

Automatic with mains control and ATS with visualization. The visualization will be in the genset and in the ATS box. CEM7+CEC7



AC5

Automatic Mains Failure control panel. Wall mounted Automatic control panel including transfer switch with thermal magnetic protection (according to voltage and phase). CEA7



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Controllers Features

	CEM 7	CEC 7	CEA 7	CEM7 + CEC7
GENERATOR READINGS				
Voltage among phases	•	•	•	•
Voltage among phases and neutral	•	•	•	•
Amperage	•	•	•	•
Frequency	•	•	•	•
Apparent power (kVA)	•	•	•	•
Active power (kW)	•	•	•	•
Reactive power (kVAr)	•	•	•	•
Power factor	•	•	•	•
MAINS READINGS				
Voltage among phases	x	•	•	•
Voltage among phase and neutral	x	•	•	•
Amperage	x	•	•	•
Frequency	x	•	•	•
Aparent power	x	x	•	•
Active power	x	x	•	•
Reactive power	x	x	•	•
Power factor	x	x	•	•
ENGINE READINGS				
Coolant temperature	•	x	•	•
Oil pressure	•	x	•	•
Fuel level (%)	•	x	•	•
Battery voltage	•	x	•	•
R.P.M.	•	x	•	•
Battery charge alternator voltage	•	x	•	•
ENGINE PROTECTIONS				
High water temperature	•	x	•	•
High coolant temperature by sensor	•	x	•	•
Low engine temperature by sensor	•	x	•	•
Low oil pressure	•	x	•	•
Low oil pressure by sensor	•	x	•	•
Low coolent level	•	x	•	•
Unexpected shutdown	•	x	•	•
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				
High frequency	•	•	•	•
Low frequency	•	•	•	•
High voltage	•	•	•	•
Low voltage	•	•	•	•
Short-circuit	•	x	•	•
Asymmetry among phases	•	•	•	•
Incorrect phase sequence	•	•	•	•
Inverse power	•	x	•	•
Overload	•	x	•	•
Genset signal droop	•	•	•	•

• Standard
x Not included
• Optional

NOTE: All protections are programmable to make “warning” or “stop with cooling time” or “without”

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Controllers Features

	CEM 7	CEC 7	CEA 7	CEM7 + CEC7
COUNTERS				
Total hour counter	•	•	•	•
Partial hour counter	•	•	•	•
Kilowatimeter	•	•	•	•
Starts valid counters	•	•	•	•
Starts failure counters	•	•	•	•
Maintenance	•	•	•	•
COMUNICATIONS				
RS232	•	•	•	•
RS485	•	•	•	•
Modbus IP	•	•	•	•
Modbus	•	•	•	•
CCLAN	•	x	•	•
Software for PC	•	•	•	•
Analogic modem	•	•	•	•
GSM/GPRS modem	•	•	•	•
Remote screen	•	x	•	•
Telesignal	•(8+4)		•(8+4)	•(8+4)
J1939	•	x	•	•
FEATURES				
Alarms history	(10) / (•+100)	-10	(10) / (•+100)	(10) / (•+100)
External start	•	•	•	•
Start inhibition	•	•	•	•
Mains failure start	•(CEC7)	•	•	•
Start under normative EJP	•	x	•	•
Genset contactor activation	•	x	x	•
Main & Genset contactor activation	x	•	•	•
Fuel transfer control	•	x	•	•
Engine temperature control	•	x	•	•
Manual override	•	x	•	•
Programmable alarms	•	x	•	•
Genset start function in test mode	•	x	•	•
Programmable outputs	•	x	•	•
Multilingual	•	•	•	•
SPECIAL FUNCTIONS				
Positioning GPS	•		•	•
Synchronization with mains	•		•	•
Mains Synchronism	•		•	•
Second Cero suppression	•		•	•
RAM 7	•		•	•
Remote screen	•		•	•
Timer	•		•	•

- • Standard
- x Not included
- • Optional

CEC7: available when the controller CEC7 is incorparted to the installation
MPS 5.0: available application when the module MPS 5. has been incorporated to the panel.
Note: AS5 + CC2 configuration, will have all CEM7 funcionality plus CEC7 mains readings.

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Generating Sets Standard and Optional Features

Engine

· Diesel engine
· 4 strokes-cycle
· Water-cooled
· 12V Electrical system
· Radiator with blowing fan
· water separator decanting filter (no visible level)
· Electronic governor
· Sender WT
· Senders OP
· Low water level sensor
· Dry air cleaner
· Hot components guards
· Mobile components guards

Alternator

· Self-excited and Self-regulated
· 4 poles
· AVR governor
· IP23 protection degree
· Insulation H class
· Single drive-shaft
· Flexible disc coupling

Electrical system

· Control and power electric panel, with measurements devices and controller (according to necessity and configuration)
· 4 poles circuit breaker
· Battery disconnector
· Earth leakage protection adjustable (time & sensibility) standard in M5 and AS5 configuration with MCCB
· Battery charger (standard on automatic control panels)
· Pre-heating resistance (standard on automatic control panels) / water jacket heater
· Battery charge alternator with ground connection
· Starting battery/ies installed and connected to the engine (supports included)
· Ground connection electrical installation with connection ready for ground pike (not supplied)

Open set version

· Steel made chassis
· Emergency stop button
· Oil sump extraction kit
· Antivibration shock absorber
· Chassis with integrated fuel tank
· Fuel level sensor
· High mechanical strenght
· Powder coating
· Drain cap fuel tank
· Steel made residential silencer -15db(A) attenuation

Optional :
· Fuel transfer pump
· Steel made residential silencer -35db(A) attenuation.

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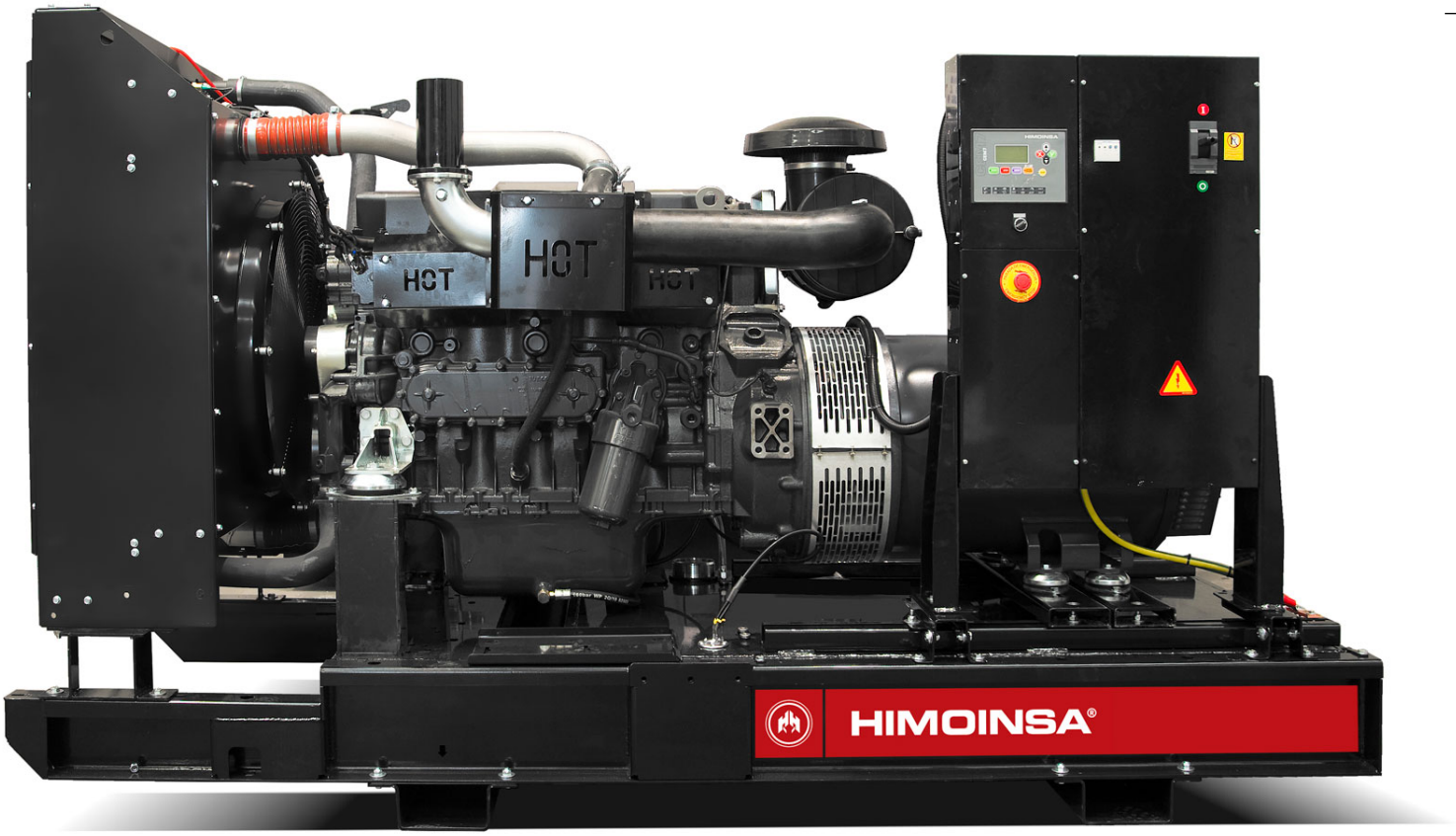

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