



HEAVY RANGE Container Powered by MTU



### **Generating Rates**

	50Hz	
	PRP	STANDBY
kVA	657	713
kW	525	570
r.p.m.	1.	500
V	400	
V	400/230; 380	)/220; 415/240
	(	),8
	kW	kVA         657           kW         525           r.p.m.         1.           V         400/230; 380

#### HIMOINSA company with quality certification ISO 9001:2008 HIMOINSA gensets are compliant with the following directives

- 2006/42/CE Machinery safety. 2004/108/CE Electromagnetic compatibility.
- EN 12100, EN 13857 y EN 60204 Design and manufacturing.
  97/68/CE Emissions of gaseous and particulate pollutants.
- 2000/14/CE Sound Power level. Noise emissions outdoor equipment. • 2006/95/CE Low voltage

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

#### Prime Power (PRP):

According to Standard ISO 8528-1:2005, this is the maximum power available for variable loads for unlimited running hours a year between the maintenance times recommended by the maintenance under the environmental conditions established by the same. The average power consumed over a 24-hour period may not exceed 70% of the PRP.

Emergency Standby Power (ESP): According to Standard ISO 8528-1:2005, this is the maximum power available for variable loads to be used when a normally available electrical supply network or grid fails or under test conditions where the running hours will be less than 200 hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same. The average power consumed over a 24-hour period may not exceed 70% of the ESP.

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

#### Subsidiaries:

UK | PORTUGAL | POLAND | GERMANY I SINGAPORE | UAE | MEXICO | PANAMÁ | ARGENTINA







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## Engine Specifications 1.500 r.p.m.

ENGINE		PRP	STANDBY	
Rated Output	kW	576	634	
Manufacturer		MTU		
Model		12V1600G20F		
Engine Type		Diesel 4 strokes-cycle		
Injection Type		Dire	ect	
Aspiration Type		Turbocharged a	aftercooled	
Ciylinders Arrangement		12	V	
Bore and Stroke	mm	122 x	: 150	
Displacement	L	21		
Cooling System		coolant		
Lube Oil Specifications		S10 W40		
Compression Ratio		17,5		
Fuel Consumption StandBy	l/h	141,5		
Fuel Consumption 100% PRP	l/h	128	,6	
Fuel Consumption 75 % PRP	l/h	99,	0	
Fuel Consumption 50 % PRP	l/h	69,	0	
Fuel Consumption 25 % PRP	l/h	37,	3	
Lube Oil Consumption Full Load		0,5	5	
Total oil capacity including tubes, filters	L	72,	5	
Governor	Туре	Elect	ronic	
Air Filter	Туре	Dr	у	
Inner diameter exhaust pipe	mm	10	6	







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### Generator

Generator		
Poles	Num	4
Winding Conections (standard)		Star - Serie
Frame Mounting		S-1 14"
Insulation	Class	H class
Enclosure (according IEC-34-5)		IP23
Exciter System		self-regulating, brushless
Voltage Regulator		A.V.R. (Electronic)
Bearing		Single bearing sealed
Coupling		Flexible disc
Coating type		Standar (Vacuum impregnation)







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## Application Data

Exhaust System		
Maximum exhaust temperature	°C	485
Exhaust Gas Flow	m3/min	120
Maximum allowed back pressure	mbar	150
Exhaust Flange Size (external diameter)	mm	118

Air Inlet System			
Intake Air Flow	m3/h	45	
Cooling Air Flow	m3/s	672	
Alternator fan air flow	m3/s	54	

Starting System		
Starting Motor	kW	8
Starting Motor	CV	10,88
Recommended Battery Capacity	Ah	2 x 75
Auxiliary Voltage	Vcc	24
Current of starter (Rush)	А	800
Current of starter (Cranking)	А	250

Fuel System			
Fuel Oil Specifications		Diesel	
Fuel Tank	L	0	





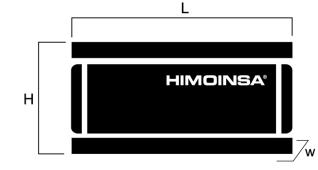


### Model: HPCW-660 T5 HEAVY RANGE

Container

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Dimensions



Weight and Dimensions		
Length	mm	2.991
(H) Height	mm	2.591
(W) Width	mm	2.438
Shipping Volume seaworthy (standard suplier)	m3	18,89
(*) Wet weight	Kg	7.870
Fuel tank capacity	L	0
(*) (with standard accesories)		

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STANDARD VERSION

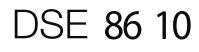
Himoinsa reserves the right to modify any characteristic without prior notice. Weights and dimensions based on products standar. Illustrations may include optional equipment. Technical data described here correspond with the available information at the moment of printing. Industrial design under patent.

Local Distributor









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## Synchronizing Panel

Automatic control panel WITHOUT ATS (Automatic Transfer Switch) and WITHOUT mains control with thermal magnetic protection (according to voltage and number of phases) and Earth leakage protection, composed by:

- Control and power electric panel, with measurements devices and controller (according to necessity and configuration), both fitted on the Genset.
- Automatic circuit breaker (one for each set) of suitable rated current completed with motorized driver, opening coil MN and aux. contacts.
- Earth leakage adjustable protection (time [inst 0,2 0,5 3 5 s] sesibility [30 300mA 3A])
- Battery Charger
- Engine water preheating.



### **Control Panel**

The DSE8610 is an easy to use multi-generator loadshare system, designed to synchronise up to 32 generators including electronic and non-electronic engines.

The DSE8610 monitors the generator and indicates operational status and fault conditions, automatically starting or stopping the engine on load demand or fault condition.

System alarms are annunciated on the LCD screen (multiple language options available), illuminated LED and audible sounder. The event log will record 250 events to facilitate easy maintenance. An extensive number of fixed and flexible monitoring, metering and protection features are included as well as comprehensive communication and system expansion options.

Using the DSE PC Configuration Suite Software allows easy alteration of the operational sequences, timers and alarms. With all communication ports capable of being active at the same time, the DSE8610 is ideal for a wide variety of demanding load share applications.









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### **Control Panel**

### **KEY LOAD SHARE FEATURES:**

- Peak lopping
- Sequential set start
- Manual voltage/frequency adjustment

- R.O.C.O.F. and vector shift
- Generator load demand
- Automatic hours run balancing
- Mains (Utility) de-coupling
- Mains (Utility) de-coupling test mode
- Dead bus sensing
- Bus failure detection
- Direct governor and AVR control
- Volts and frequency matching
- kW and kV Ar load sharing

#### **KEY BENEFITS**

- RS232 & RS485 can be used at the same time
- DSENet connection for system expansion
- PLC functionality
- Auto voltage sensing
- Five step dummy load support
- Five step load shedding support
- High number of inputs and outputs
- Worldwide language support
- Configuration Suite PC software
- Direct USB connection to PC
- Ethernet monitoring
- USB host
- Data logging & trending

### **KEY FEATURES**

- Comprehensive loadshare capabilities
- Configurable inputs (11)
- Configurable outputs (8)
- Voltage measurement
- Built-in governor and AVR control
- kW overload alarms
- Comprehensive electrical protection
- Magnetic pick-up
- Electronic engine capability
- RS232 & RS485 remote communications
- Modbus RTU
- PLC functionality
- Multi event exercise timer
- Back-lit LCD 4-line text display
- Multiple display languages
- Automatic start/Manual start
- Audible alarm
- Fixed and flexible LED indicators
- Event log (250)
- Engine protection
- Fault condition notification to a designated PC
- Front panel mounting
- Protected front panel programming
- PC configuration
- Configurable alarms and timers
- Configurable start and stop timers
- SMS alert messaging
- Remote monitoring







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## Control Panel\_ALARMS

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#### **ENGINE ALARMS**

- 1. High coolant temperature.
- 2. Low oil pressure.
- 3. Battery charge alternator
- 4. Start failure.
- 5. Low water level.
- 6. Fuel storage.
- 7. Overspeed.
- 8. Under speed.
- 9. Low battery voltage.
- 10. High coolant temperature by sensor.
- 11. Low oil pressure by sensor.
- 12. Low fuel level by sensor.
- 13. Unexpected shutdown.
- 14. Stop failure.
- 15. Low engine temperature.
- 16. Genset voltage drops.
- 17. Emergency stop.

#### **GENERATOR ALARMS**

- 1. Over-load
- 2. Unbalanced voltage
- 3. Over voltage
- 4. Under voltage
- 5. Over frequency
- 6. Under frequency
- 7. Over load
- 8. Short-circuit
- 9. Inverse Power
- 10. Incorrect phase sequence
- 11. Asymmetry among phases
- 12. Emergency stop

## Control Panel\_READINGS

#### **ENGINE READINGS**

Coolant temperature Oil pressure Fuel level (%) Battery voltage R.P.M. Battery charge alternator voltage

#### **GENERATOR READINGS**

Voltage among phases Voltage among phases and neutral Amperage Frequency Apparent power (kVA) Active power (kVV) Reactive power (kVAr) Power factor







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## Generating Sets Standard and Optional Features

#### Engine

- · Diesel engine
- · 4 strokes-cycle
- · Water-cooled
- · 24V Electrical system
- · Remote cooling radiator
- · Water separator decanting filter (visible level)
- · Electronic governor
- · Sender WT
- · Senders OP
- · Low water level sensor
- · Dry air cleaner
- · Hot components and radiator guards
- · Mobile components guards

#### Alternator

- $\cdot$  Self-excited and Self-regulated
- · IP23 protection degree
- · Insulation H class

#### Container version

- $\cdot$  Soundproof insulation made of high density volcanic rockwool
- · High mechanical resistance
- · Low level of sound emissions
- · System of interior lighting
- $\cdot$  Door with window to visualize control panel, alarms and measurements
- $\cdot$  Hoisting points reinforced for crane lifting and forklift pockets
- $\cdot$  Residential silencer steel made, with -35dB attenuation and tilting cap in the exhaust
- · Anti-vibration shock absorbers
- · Steel chassis
- · Manual oil extraction pump
- · Robust construction designed for continuous or emergency applications
- Stainless steel fittings
- · Emergency stops







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## Generating Sets Standard and Optional Features

#### Container version

- · Easy access to the power connection
- · Reinforced chassis for heavy range
- · Easy access for chassis cleaning
- $\cdot$  Silent-block with anti-corrosion protection between the genset and the chassis
- · Easy access to fill radiator through the roof
- $\cdot$  Automatic lube oil replenishment system with a 50L tank
- · 10 feet ISO Container
- · External connection to fuel tank

### Container Electrical System

- · Battery charger
- · Pre-heating resistance
- · Control panel and emergency stop button
- · Power panel
- $\cdot$  Battery charge alternator with ground connection
- $\cdot$  Starting battery/ies installed and connected to the engine (supports included)
- · Ground connection electrical installation with connection ready for ground pike (not supplied)
- · 4 poles circuit breaker
- · Power panel with safety protection in ouput terminals box (open thermal magnetic protection and alarm)
- · Maintenance-free and anti-blast battery
- · Battery isolator



