



# HIMOINSA



MODEL  
**HPCW-660 T5**  
 RENTAL RANGE  
 Soundproofed rental  
 Powered by MTU

- 10FT
- WATER-COOLED
- THREE PHASE
- 50 HZ
- NON REQUIRED 97/68
- DIESEL

## Generating Rates



SERVICE		PRP	STANDBY
Power	kVA	658	713
Power	kW	658	713
Rated Speed	r.p.m.	1.500	
Standard Voltage	V	400/230	
Available Voltages	V	380/220 - 415/240	
Rated at power factor	Cos Phi	0,8	

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)
- 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, 25°C, 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

G2 class load acceptance in accordance with ISO 8528-5:2013

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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		4-stroke diesel	
Injection Type		Direct	
Aspiration Type		Turbocharged and after-cooled	
Number of cylinders and 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	
Fuel Consumption 50 % PRP	l/h	69	
Fuel Consumption 25 % PRP	l/h	37,3	
Lube oil consumption with full load		0,5 % of fuel consumption	
Total oil capacity including tubes, filters	L	72,5	
Governor	Type	Electrical	
Air Filter	Type	Dry	
Inner diameter exhaust pipe	mm	106	

## Generator

Generator		
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)



## Application Data

Exhaust System		
Maximum exhaust temperature	°C	485
Exhaust Gas Flow	m <sup>3</sup> /min	120
Maximum allowed back pressure	mbar	150
Exhaust Flange Size (external diameter)	mm	118

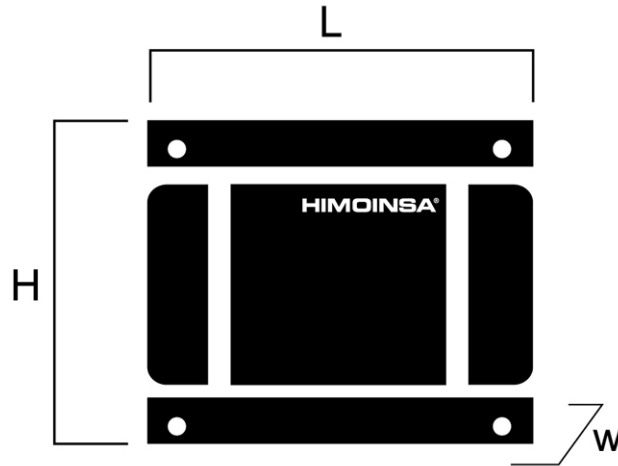
Necessary Amount Of Air		
Intake air flow	m <sup>3</sup> /h	45
Cooling Air Flow	m <sup>3</sup> /s	672
Alternator fan air flow	m <sup>3</sup> /s	0,9

Starting System		
Starting power	kW	8
Starting power	CV	10,88
Recommended battery	Ah	75 x 2
Auxiliary Voltage	Vdc	24
Starter current peak	A	800
Nominal starter current	A	250

Fuel System		
Fuel Oil Specifications		Diesel
Fuel Tank	L	0



## Dimensions



10ft		<i>Weight and Dimensions</i>	
(L)	Length	mm	2.991
(H)	Height	mm	2.591
(W)	Width	mm	2.438
	Maximum shipping volume	m <sup>3</sup>	18,89
(*)	Weight with liquids in radiator and sump	kg	7.870
	(*) (with standard accessories)		STANDARD VERSION (Steel tank)

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.  
 Industrial design under patent.

Local Distributor



## DSE 8610

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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] sensibility [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.





## 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



## Control Panel\_ALARMMS

### 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 (kW)  
Reactive power (kVAr)  
Power factor





## Control Panel\_PROTECTIONS

### ENGINE PROTECTIONS

- High water temperature
- High coolant temperature by sensor
- Low engine temperature by sensor
- Low oil pressure
- Low oil pressure by sensor
- Low coolant level
- Unexpected shutdown
- Fuel storage
- Fuel storage by sensor
- Stop failure
- Battery voltage failure
- Battery charge alternator failure
- Overspeed
- Under speed
- Start failure
- Emergency Stop

### ALTERNATOR PROTECTIONS

- High frequency
- Low frequency
- High voltage
- Low voltage
- Short-circuit
- Asymmetry among phases
- Incorrect phase sequence
- Inverse power
- Overload
- Genset signal droop

## Control Panel\_OPERATING MODE

1. Locked | OFF. Controller is switched off, it is not allowed any operation on the Genset, all sequences are blocked. This has to be configured for maintenance operation.
2. Manual Mode | MAN. Gensets starts through frontal command, breaker closing is manual but all protection devices are activated..
3. Automatic Mode | AUTO.
  - a. Parallel with main| LOAD SHARING. Genset and the main work together sharing the load. Back-Synch is not available.
  - b. Parallel with main | BASE LOAD. Genset and the main work together. Genset works at a fixed power. Back-Synch is not available.
  - c. Parallel with main | PEAK SHAVING. Genset and the main work together. The main is the main supplier and the Genset supplies peaks. Back-Synch is not available.

**Pictures are indicative, components features may change at any time.**





## Generator set features

### Engine

- STAGE 3A
- Diesel engine
- 4-stroke cycle
- Water-cooled
- 24V electrical system
- Remote radiator
- Water separator filter (visible level)
- Electronic governor
- HTW sender
- LOP sender
- Radiator water level sensor
- Dry air filter
- Hot parts protection
- Moving parts protection

### Alternator

- Self-excited and self-regulated
- IP23 protection
- H class insulation

### Container version

- Soundproofing provided by high-density volcanic rock wool
- High mechanical resistance
- Low level of noise emissions
- System of interior lighting
- Door with window to visualize control panel, alarms and measurements
- Reinforced lifting points for crane hoisting and lower ones for transportation by forklift
- Residential steel silencer 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



## Generator set features

### Container version

- Emergency stops
- Easy access to the power connection
- Reinforced chassis for heavy range
- Easy access for chassis cleaning
- Silent-block with anti-corrosion protection between the genset and the chassis
- Easy access to fill radiator through the roof
- 50L tank for automatic oil replenishment
- 10-foot container
- External connection to fuel tank

### Electrical System Container

- Control panel and emergency stop button
- Battery charger
- Heating resistor
- Power panel
- Battery charge alternator with ground connection
- Starter battery/ies installed (cables and bracket included)
- Ground connection electrical installation with connection ready for ground spike (not supplied)
- 4 pole circuit breaker
- Power panel with safety protection in output terminals box (open thermal magnetic protection and alarm)
- Maintenance-free and anti-explosion battery
- Battery isolator



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## PDF Summary

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