



**HIMOINSA®**  
THE ENERGY



MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

- 10 FT
- WATER-COOLED
- THREE PHASE
- 60 HZ
- DIESEL

## Generating Rates



SERVICE		PRP	STANDBY
Power	kVA	587	646
Power	kW	470	517
Rated Speed	r.p.m.	1.800	
Standard Voltage	V	480/277	
Available Voltages	V	220/127 - 416/240 - 440/254 V	
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.
- 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)
- 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

**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 • BRASIL

**Subsidiaries:**

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



Ctra. Murcia - San Javier, km. 23,6 | 30730 San Javier (Murcia) SPAIN | Tel.: +34 902 19 11 28 / +34 968 19 11 28  
Fax: +34 968 19 12 17 | Export Fax +34 968 19 04 20 | E-mail:info@himoinsa.com | www.himoinsa.com





## Engine Specifications 1.800 r.p.m.

ENGINE		PRP	STANDBY
Rated Output	kW	511	561
Manufacturer		MTU	
Model		10V1600G20S	
Engine Type		Diesel 4 strokes-cycle	
Injection Type		Direct	
Aspiration Type		Turbocharged and aftercooled	
Cylinders Arrangement		10V	
Bore and Stroke	mm	122 x 150	
Displacement	L	17,5	
Cooling System		coolant	
Lube Oil Specifications		S10 W40	
Compression Ratio		17,5	
Fuel Consumption StandBy	l/h	123,94	
Fuel Consumption 100% PRP	l/h	114,08	
Fuel Consumption 75 % PRP	l/h	90,02	
Fuel Consumption 50 % PRP	l/h	66,85	
Fuel Consumption 25 % PRP	l/h	36,39	
Lube Oil Consumption Full Load		0,5 % of fuel consumption	
Total oil capacity including tubes, filters	L	60,5	
Governor	Type	Electrical	
Air Filter	Type	Dry	
Inner diameter exhaust pipe	mm	106	

## Generator

Generator		
Poles	Num	4
Winding Conections (standard)		Star - Parallel
Frame Mounting		S-1 14"
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)



## Application Data

Exhaust System		
Maximum exhaust temperature	°C	461
Exhaust Gas Flow	m3/min	102,6
Maximum allowed back pressure	mbar	150
Exhaust Flange Size (external diameter)	mm	118

Air Inlet System		
Intake Air Flow	m3/h	2124
Cooling Air Flow	m3/s	17,4
Alternator fan air flow	m3/s	1,08

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

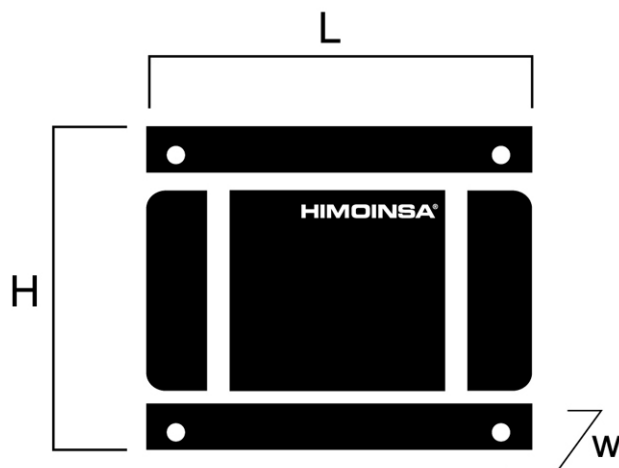
Fuel System		
Fuel Oil Specifications		Diesel
Fuel Tank	L	0



**HIMOINSA®**  
THE ENERGY

MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

## Dimensions



10ft	Weight and Dimensions		
(L)	Length	mm	2.991
(H)	Height	mm	2.591
(W)	Width	mm	2.438
	Shipping Volume seaworthy (standard supplier)	m3	18,89
(*)	Wet weight	Kg	7.200
	Sound Level	Db(A)@7m	72

(\*) (with standard accessories)

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



**HIMOINSA®**  
THE ENERGY

# DSE 8610

MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

## 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.



05

## 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.





**HIMOINSA®**  
THE ENERGY

MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

## 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



**HIMOINSA®**  
THE ENERGY

MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

## 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

07

## 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.**





**HIMOINSA®**  
THE ENERGY

MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

## Generating Sets Standard and Optional Features

### Engine

- EPA TIER 2
- 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 guards
- Mobile components guards

### Alternator

- Self-excited and Self-regulated
- IP23 protection degree
- Insulation H class

### Container version

- Soundproof insulation made of high density volcanic rockwool
- High mechanical resistance
- Low level of sound emissions
- System of interior lighting
- Door with window to visualize control panel, alarms and measurements
- Hoisting points reinforced for crane lifting and forklift pockets
- 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



**HIMOINSA®**  
THE ENERGY

MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

## Generating Sets Standard and Optional 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
- 10 feet ISO Container
- External connection to fuel tank
- Automatic lube oil replenishment system with a 50L tank

### Container Electrical System

- Battery charger
- Pre-heating resistance
- Control panel and emergency stop button
- 3 poles circuit breaker
- Power panel
- 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)
- Power panel with safety protection in output terminals box (open thermal magnetic protection and alarm)
- Maintenance-free and anti-blast battery
- Battery isolator



**HIMOINSA®**  
THE ENERGY

MODEL  
**HPCW-520 T6**  
HEAVY RANGE  
Container  
Powered by MTU

## PDF Summary

Created : 26/11/2014 08:49

Author : Himoinsa

Number of pages : 11

Report Type: Data Sheet - Heavy 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. Synchronizing Panel & Controller

Page 6. Controller

Page 7. Controller Alarms & Readings

Page 8. Controller Protections & Operating Mode

Page 9. Generator Features & Options

Page 10. Generator Features & Options

Page 11. PDF Summary (ID454E36393331313833)

[http://www.himoinsa.com/generating-sets/693\\_22/diesel-generator-hpcw-520\\_t6-mtu-60hz-heavy-range-prp\\_587kva.aspx](http://www.himoinsa.com/generating-sets/693_22/diesel-generator-hpcw-520_t6-mtu-60hz-heavy-range-prp_587kva.aspx)



11



Ctra. Murcia - San Javier, km. 23,6 | 30730 San Javier (Murcia) SPAIN | Tel.: +34 902 19 11 28 / +34 968 19 11 28  
Fax: +34 968 19 12 17 | Export Fax +34 968 19 04 20 | E-mail: info@himoinsa.com | www.himoinsa.com

