



# HIMOINSA

MODEL  
**HTW-790 T5**  
 HEAVY RANGE  
 Container  
 Powered by MITSUBISHI



- 20FT-HC
- WATER-COOLED
- THREE PHASE
- 50 HZ
- DIESEL

## Generating Rates



SERVICE		PRP	STANDBY
Power	kVA	788	860
Power	kW	631	688
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	

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### 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	668	738
Manufacturer		MITSUBISHI	
Model		S6R2 A2PTAW2-5	
Engine Type		4-stroke diesel	
Injection Type		Direct	
Aspiration Type		Turbocharged and after-cooled	
Number of cylinders and arrangement		6-L	
Bore and Stroke	mm	170 x 220	
Displacement	L	29,96	
Cooling System		Water	
Lube Oil Specifications		API CF, SAE 15W40	
Compression Ratio		14,0:1	
Fuel Consumption Standby	l/h	199,3	
Fuel Consumption 100% PRP	l/h	177,9	
Fuel Consumption 75 % PRP	l/h	131	
Fuel Consumption 50 % PRP	l/h	89	
Fuel Consumption 25 % PRP	l/h	49,6	
Total oil capacity including tubes, filters	L	100	
Total coolant capacity	L	261	
Heat dissipated by coolant	kW	286	
Governor	Type	Electrical	
Air Filter	Type	Dry	

## Generator

Generator		
Manufacturer		STAMFORD
Poles	No.	4
Connection type (standard)		Star-series
Mounting type		S-0 18"
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	475
Exhaust Gas Flow	m <sup>3</sup> /min	191
Maximum allowed back pressure	mm H <sub>2</sub> O	600
Heat dissipated by exhaust pipe	kW	764,1

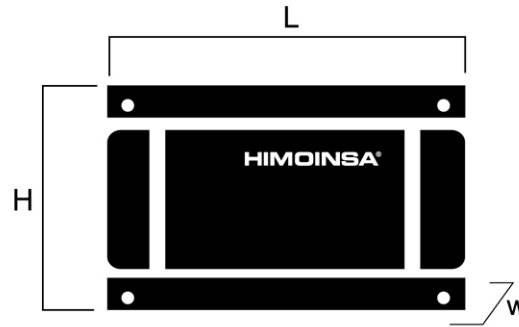
Necessary Amount Of Air		
Intake air flow	m <sup>3</sup> /h	4320
Cooling Air Flow	m <sup>3</sup> /s	16,5
Alternator fan air flow	m <sup>3</sup> /s	1,614

Starting System		
Starting power	kW	7,5
Starting power	CV	10,2
Recommended battery	Ah	200
Auxiliary Voltage	Vdc	24

Fuel System		
Fuel Oil Specifications		Diesel
Maximum power suction pump	mm Hg	75
Maximum return feed pump	mm Hg	150
Fuel Tank	L	999



## Dimensions



20 hc	Weight and Dimensions		
(L)	Length	mm	6.058
(H)	Height	mm	2.896
(W)	Width	mm	2.438
	Maximum shipping volume	m <sup>3</sup>	42,77
(*)	Weight with liquids in radiator and sump	kg	10.371
	Fuel tank capacity	L	999
	Autonomy	Hours	8
	Sound pressure level	dB(A)@7m	78 ± 2,4

(\*) (with standard accessories)

STANDARD VERSION

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



## CONTROL PANEL MODEL

### **M5**

*Digital manual Auto-Start control panel and thermal magnetic protection (depending on current and voltage) and differential with CEM7. Digital control unit CEM7*

### **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.*

### **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*

### **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*



## Controller features (I)

- : Standard
- x : Not included
- : Optional

Generator Readings	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Voltage between phases	•	•	•	•
Voltage between neutral and phase	•	•	•	•
Current intensities	•	•	•	•
Frequency	•	•	•	•
Apparent power (Kva)	•	•	•	•
Active power (Kw)	•	•	•	•
Reactive power (kVAr)	•	•	•	•
Power factor	•	•	•	•
Mains Readings	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Voltage between phases	x	•	•	•
Voltage between phases and neutral	x	•	•	•
Current intensities	x	•	•	•
Frequency	x	•	•	•
Apparent power	x	•	x	x
Active power	x	•	x	x
Reactive power	x	•	x	x
Power factor	x	•	x	x
Engine Readings	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Coolant temperature	•	•	x	•
Oil pressure	•	•	x	•
Fuel level (%)	•	•	x	•
Battery voltage	•	•	x	•
R.P.M.	•	•	x	•
Battery charge alternator voltage	•	•	x	•
Engine Protections	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
High water temperature	•	•	x	•
High water temperature by sensor	•	•	x	•
Low water temperature by sensor	•	•	x	•
Low oil pressure	•	•	x	•
Low oil pressure by sensor	•	•	x	•
Low water level	•	•	x	•
Unexpected shutdown	•	•	x	•



## Controller features (II)

- : Standard
- x : Not included
- (blue) : Optional

Engine Protections	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
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	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
High frequency	•	•	•	•
Low frequency	•	•	•	•
High voltage	•	•	•	•
Low voltage	•	•	•	•
Short-circuit	•	•	x	•
Asymmetry between phases	•	•	•	•
Incorrect phase sequence	•	•	•	•
Inverse power	•	•	x	•
Overload	•	•	x	•
Genset signal drop	•	•	•	•
Counters	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Total hour counter	•	•	•	•
Partial hour counter	•	•	•	•
Kilowatt meter	•	•	•	•
Starts valid counters	•	•	•	•
Starts failure counters	•	•	•	•
Maintenance	•	•	•	•
Communications	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
RS232	• (blue)	• (blue)	• (blue)	• (blue)
RS485	• (blue)	• (blue)	• (blue)	• (blue)
Modbus IP	• (blue)	• (blue)	• (blue)	• (blue)
Modbus	• (blue)	• (blue)	• (blue)	• (blue)



## Controller features (III)

- : Standard
- x : Not included
- : Optional

Communications	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
CCLAN	•	•	x	•
Software for PC	•	•	•	•
Analogue modem	•	•	•	•
GSM/GPRS modem	•	•	•	•
Remote screen	•	•	x	•
Tele signal	• (8 + 4)	• (8 + 4)	x	• (8 + 4)
J1939	•	•	x	•
Features	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
Alarm history	• (10) / (opc. +100)	• (10) / (opc. +100)	• (10) / (opc. +100)	• (10) / (opc. +100)
External start	•	•	•	•
Start inhibition	•	•	•	•
Mains failure start	x	•	•	•
Start under normative EJP	•	•	x	•
Pre-heating engine control	•	•	x	•
Genset contactor activation	•	•	•	•
Mains & Genset contactor activation	x	•	•	•
Fuel transfer control	•	•	x	•
Engine temperature control	•	•	x	•
Manual override	•	•	x	•
Programmable alarms	•	•	x	•
Genset start function in test mode	•	•	•	•
Programmable outputs	•	•	x	•
Multilingual	•	•	•	•
Special Functions	CEM 7	CEA 7	CEC 7	CEM7 + CEC7
GPS Positioning	•	•	x	•
Synchronisation	•	•	x	•
Mains synchronization	•	•	x	•
Second Zero elimination	•	•	x	•
RAM7	•	•	x	•
Remote screen	•	•	x	•
Programming timer	•	•	x	•





## Generator set features

### Engine

- Standard air filter
- Standard fuel filter
- Standard oil filter
- Oil temperature sensor
- Coolant level sensor
- Exhaust gas compensator
- Diesel engine
- 4-stroke cycle
- Water-cooled
- 24V electrical system
- Radiator with blower fan
- Electronic governor
- HTW sender
- LOP sender
- Hot parts protection
- Moving parts protection

### Alternator

- Self-excited and self-regulated
- 4 poles
- AVR governor
- IP23 protection
- H class insulation

### Container version

- Soundproofing provided by high-density volcanic rock wool
- High mechanical resistance
- Low level of noise emissions
- 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
- Fuel tank integrated in the chassis
- Anti-vibration shock absorbers



## Generator set features

### Container version

- Steel chassis
- Manual oil extraction pump
- Robust construction designed for continuous or emergency applications
- Stainless steel fittings
- 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

### Electrical System Container

- Control panel and emergency stop button
- Power panel
- Battery charger (standard on automatic control panels)
- Heating resistor (standard on sets with automatic control panels)
- 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



# HIMOINSA

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**HTW-790 T5**  
HEAVY RANGE  
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## PDF Summary

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