

## HTW-2295 T5

**INDUSTRIAL RANGE Powered by MITSUBISHI** 



SERVICE		PRP / DCP	ESP
POWER	kVA	2295	2500
POWER	kW	1836	2000
RATED SPEED	r.p.m.	1.50	00
MAIN VOLTAGE	V	400/2	230
AVAILABLE VOLTAGES	V	380/220 ·	415/240
RATED AT POWER FACTOR	Cos Phi	0,8	3



#### INDUSTRIAL RANGE

HIMOINSA Company with quality certification ISO 9001

HIMOINSA gensets are compliant with EC mark which includes the following

- 2006/42/CE Machinery safety.
   2014/30/UE Electromagnetic compatibility.
   2014/30/UE electrical equipment designed for use within certain voltage limits
   2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by
- FN 12100, FN 13857, FN 60204

Ambient conditions of reference according to ISO 8528-1:2020 normative: 1000 mbar, 25°C, 30% relative humidity.

Prime Power (PRP):
According to ISO 8528-1:2020, 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 8528-1:2020, 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

Continuous Power (COP): According to Standard ISO 8528-1:2020, this is the maximum power available for continuous loads for unlimited running hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same.

Data Center Power (DCP): The manufactured declares an acceptable average daily and annual load factor of 100%. Overload margin: +10%. Operating hours per year: Unlimited (For data center applications located in countries with a stable network). Uptime Institute Compliant: Tier III & IV.

"Class G2" performance according to the load impact test according to ISO 8528-5:2020

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Subsidiaries:
PORTUGAL | POLAND | GERMANY | UK | SINGAPORE | UAE | PANAMA |
DOMINICAN REPUBLIC | ARGENTINA | ANGOLA | SOUTH AFRICA | MOROCOO



#### CONTAINER



40FT-HC



WATER-COOLED



THREE PHASE



50 HZ



DIESEL

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.

The illustrations and images are indicative and may not coincide in their entirety with the product.

Industrial design under patent.









### Engine Specifications | 1.500 r.p.m.

Rated Engine Output (PRP) / DCP	kW	1899
Rated Engine Output (ESP)	kW	2106
Manufacturer		MITSUBISHI
Model		S16R2 PTAW
Engine Type		4-stroke diesel
Injection Type		Direct
Aspiration Type		Turbocharged and after-cooled
Number of cylinders and arrangement		16-V
Bore and Stroke	mm	170 x 220
Displacement	L	79,9
Cooling System		Water
Lube Oil Specifications		API CF, SAE 15W40
Compression Ratio		14,0:1

Lube oil consumption with full load	g/kWh	0,8
Total oil capacity including tubes, filters	L	290
Total coolant capacity	L	500
Governor	Туре	Electrical
Air Filter	Туре	Dry



- Oil temperature sensor
- Low coolant level sensor
- Exhaust gas compensator
- Diesel engine
- 4-stroke cycle
- Water-cooled

- 24V electrical system
- Standard air filter
- Standard fuel filter
- Standard oil filter
- Radiator with pusher fan (vertical configuration)
- HTW sender

- LOP sender
- Electronic governor
- · Hot parts protection
- Moving parts protection



## Generator Specifications | MECC ALTE

Manufacturer		MECC ALTE
Model		ECO46 1.5L/4 A
Poles	No.	4
Connection type (standard)		Star - Parallel
Mounting type		S-00 21"
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)



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

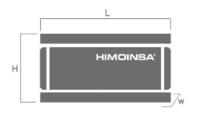






#### **WEIGHT AND DIMENSIONS**

		Standard Version
Length (L)	mm	12192
Height (H)	mm	2896
Width (W)	mm	2438
Maximum shipping volume	m³	86,08
Weight with liquids in radiator and sump	Kg	25780
Fuel tank capacity	L	2000
Autonomy (70% PRP)	Hours	6
Autonomy (100% PRP)	Hours	4



#### **APPLICATION DATA**

#### **EXHAUST SYSTEM**

Maximum exhaust temperature	°C	497
Exhaust Gas Flow	m³/min	498
Maximum allowed back pressure	mm H2o	600
Heat dissipated by exhaust pipe	KCal/Kwh	615,26

#### **NECESSARY AMOUNT OF AIR**

Intake air flow	m³/h	11280
Cooling Air Flow	m³/s	38,6
Alternator fan air flow	m³/s	2,25

#### **FUEL CONSUMPTION**

Fuel Consumption ESP	l/h	560,7
Fuel Consumption 100% PRP	l/h	500,2
Fuel Consumption 70 % PRP	l/h	346,18
Fuel Consumption 50 % PRP	l/h	251,3

#### **FUEL SYSTEM**

Fuel Oil Specifications		Diesel
Maximum power suction pump	mm Hg	75
Maximum return feed pump	mm Hg	150
Fuel Tank	ı	2 000

#### STARTING SYSTEM

Starting power	kW	7,5 x 2
Starting power	CV	10,2 × 2
Recommended battery	Ah	400
Auxiliary Voltage	Vdc	24
Starter current peak	А	1250
Nominal starter current	А	400

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

#### 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





# FEATURES OF THE CONTROL UNITS

		CEM 7	CEA 7	CEC 7	CEM7 + CEC7
	Voltage between phases	•	•	•	•
	Voltage between neutral and phase	•	•	•	•
	Current intensities	•	•	•	•
i. E	Frequency	•	•	•	•
Readin	Apparent power (Kva)	•	•	•	•
<u>.</u>	Active power (Kw)	•	•	•	•
era,	Reactive power (kVAr)	•	•	•	•
ē	Power factor	•	•	•	•
	Voltage between phases		•	•	•
	Voltage between phases and neutral		•	•	•
	Current intensities		•	•	•
	Frequency		•	•	•
ī. ge	Apparent power		•		
Readings	Active power		•		
Ø	Reactive power		•		
Z	Power factor		•		
	Coolant temperature	•	•		•
ø	Oil pressure	•	•		•
Readings	Fuel level (%)	•	•		•
Bea	Battery voltage	•	•		•
ä	R.P.M.	•	•		•
Engin	Battery charge alternator voltage	•	•		•
	High water temperature	•	•		•
	High water temperature by sensor	•	•		•
	Low water temperature by sensor	•	•		•
	Low oil pressure	•	•		•
	Low oil pressure by sensor	•	•		•
	Low water level	•	•		•
	Unexpected shutdown	•	•		•
	Fuel storage	•	•		•
	Fuel storage by sensor	•	•		•
	Stop failure	•	•		•
	Battery voltage failure	•	•		•
Protections	Battery charge alternator failure	•	•		•
tect	Overspeed	•	•		•
	Underspeed	•	•		•
Engine	Start failure	•	•		•
Ē	Emergency stop	•	•	•	•

Standard

Optional







		CEM 7	CEA 7	CEC 7	CEM7 + CEC7
	High frequency	•	•	•	•
ternator Protections	Low frequency	•	•	•	•
	High voltage	•	•	•	•
	Low voltage	•	•	•	•
	Short-circuit	•	•		•
	Asymmetry between phases	•	•	•	•
	Incorrect phase sequence	•	•	•	•
	Inverse power	•	•		•
	Overload	•	•		•
_₹	Genset signal drop	•	•	•	•
	Total hour counter	•	•	•	•
	Partial hour counter	•	•	•	•
	Kilowatt meter	•	•	•	•
ers	Starts valid counters	•	•	•	•
č	Starts failure counters	•	•	•	•
<u>0</u>	Maintenance	•	•	•	•
	RS232	0	0	0	0
	RS485	0	0	0	0
	Modbus IP	0	0	0	0
	Modbus	0	0	0	0
	CCLAN	0	0		0
	Software for PC	0	0	0	0
ŝ	Analogue modem	0	0	0	0
atio	GSM/GPRS modem	0	0	0	0
Si	Remote screen	0	0		0
Ē	Tele signal	<b>(8 + 4)</b>	① (8 + 4)		① (8 + 4)
ပိ	J1939	0	0		0
	Alarm history	(100)	• (100)	• (100)	• (100)
	External start	•	•	•	•
	Start inhibition	•	•	•	•
	Mains failure start		•	•	•
	Start under normative EJP	•	•		•
	Pre-heating engine control	•	•		•
	Genset contactor activation	•	•	•	•
	Mains & Genset contactor activation		•	•	•
	Fuel transfer control	•	•		•
	Engine temperature control	•	•		•
	Manual override	•	•		•
	Programmable alarms	•	•		•
9	Genset start function in test mode	•	•	•	•
atur	Programmable outputs	•	•		•
	Multilingual	•	•	•	•
	GPS Positioning	0	0		0
suo	Synchronisation	0	0		0
Special Functi	Mains synchronization	0	0		0
	Second Zero elimination	0	0		0
	RAM7	0	0		0
	Remote screen	0	0		0

Standard

Optional



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## CONTROL **PANELS**

#### 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



#### Control panel and emergency stop button

- Power panel
- Battery charger (standard on automatic control panels)
- Water Jacket Heater with single phase pump
- 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)
- **Electrical System Container** 
  - protection in output terminals box (open thermal magnetic protection and alarm)
  - Maintenance-free and anti-explosion battery

Power panel with safety

Battery isolator



