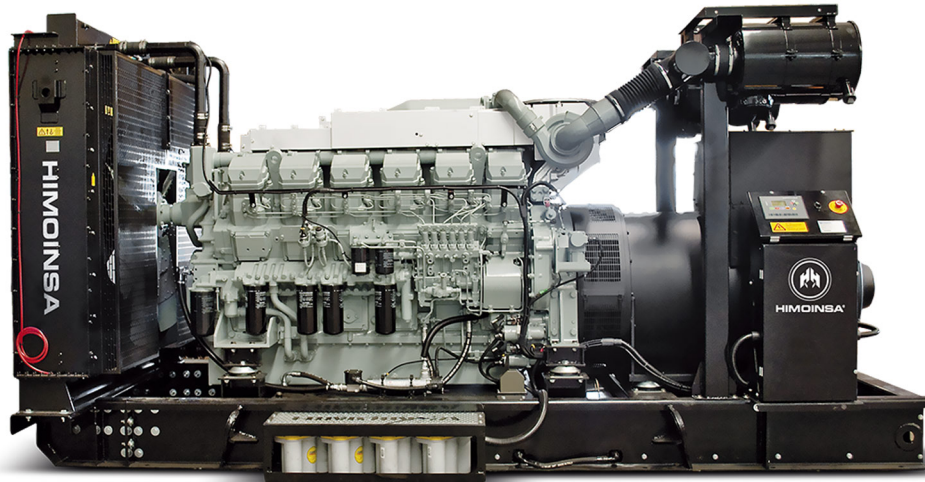




# HIMOINSA



## MODEL HTW-670 T5

HEAVY RANGE

Open Skid

Powered by MITSUBISHI



K25



WATER-COOLED



THREE PHASE



50 HZ



DIESEL

## Generating Rates



| SERVICE               |         | PRP / DCC         | ESP |
|-----------------------|---------|-------------------|-----|
| Power                 | kVA     | 670               | 738 |
| Power                 | kW      | 536               | 590 |
| 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 8528-1:2018 normative: 1000 mbar, 25°C, 30% relative humidity.

#### Prime Power (PRP):

According to ISO 8528-1:2018, 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 8528-1:2018, 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

Data Center Continuous Power (DCC): Complies with Uptime Institute: Tier III & IV. The manufacturer declares a load factor for grid failure of 100% per 24h and an average load factor per year less than 75%. No overload margin available. It can be operated for an unlimited number of hours per year. Applicable in countries with stable network. If the model is for DCC application, inform Factory.

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

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## Engine Specifications 1.500 r.p.m.

| ENGINE                                      |       | PRP / DCC                     | ESP |
|---------------------------------------------|-------|-------------------------------|-----|
| Rated Output                                | kW    | 575                           | 635 |
| Manufacturer                                |       | MITSUBISHI                    |     |
| Model                                       |       | S6R2 PTA                      |     |
| 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 CD or CF SAE 30 or SAE 40 |     |
| Compression Ratio                           |       | 14,1:1                        |     |
| Fuel Consumption ESP                        | l/h   | 151,63                        |     |
| Fuel Consumption 100% PRP                   | l/h   | 136,4                         |     |
| Fuel Consumption 75 % PRP                   | l/h   | 104,34                        |     |
| Fuel Consumption 50 % PRP                   | l/h   | 74,56                         |     |
| Fuel Consumption 25 % PRP                   | l/h   | 44,1                          |     |
| Lube oil consumption with full load         | g/kWh | 0,8                           |     |
| Total oil capacity including tubes, filters | L     | 94                            |     |
| Total coolant capacity                      | L     | 118                           |     |
| Governor                                    | Type  | Electrical                    |     |
| Air Filter                                  | Type  | Dry                           |     |
| Inner diameter exhaust pipe                 | mm    | 205                           |     |

## 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                  | 510    |
| Exhaust Gas Flow                | m <sup>3</sup> /min | 137    |
| Maximum allowed back pressure   | mm H <sub>2</sub> O | 600    |
| Heat dissipated by exhaust pipe | KCal/Kwh            | 567,61 |

### Necessary Amount Of Air

|                         |                   |       |
|-------------------------|-------------------|-------|
| Intake air flow         | m <sup>3</sup> /h | 3120  |
| Cooling Air Flow        | m <sup>3</sup> /s | 12    |
| Alternator fan air flow | m <sup>3</sup> /s | 1,035 |

### Starting System

|                         |     |      |
|-------------------------|-----|------|
| Starting power          | kW  | 7,5  |
| Starting power          | CV  | 10,2 |
| Recommended battery     | Ah  | 250  |
| Auxiliary Voltage       | Vdc | 24   |
| Starter current peak    | A   | 700  |
| Nominal starter current | A   | 370  |

### Fuel System

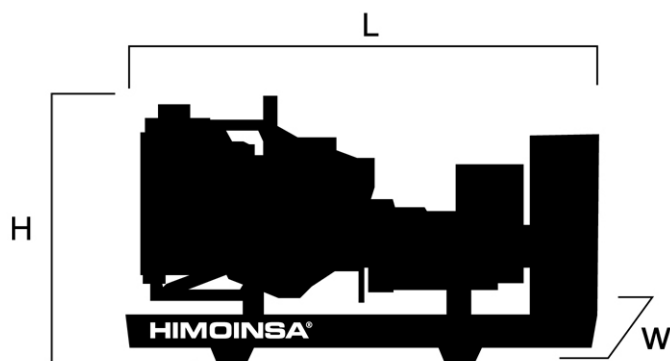
|                            |       |        |
|----------------------------|-------|--------|
| Fuel Oil Specifications    |       | Diesel |
| Maximum power suction pump | mm Hg | 75     |
| Maximum return feed pump   | mm Hg | 150    |
| Fuel Tank                  | L     | 300    |



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## Dimensions



### Weight and Dimensions

|                                              |                |       |
|----------------------------------------------|----------------|-------|
| (L) Length                                   | mm             | 3.700 |
| (H) Height                                   | mm             | 2.272 |
| (W) Width                                    | mm             | 1.686 |
| Maximum shipping volume                      | m <sup>3</sup> | 14,17 |
| (*) Weight with liquids in radiator and sump | kg             | 6.012 |
| (*) Dry weight                               | kg             | 5.804 |
| Fuel tank capacity                           | L              | 300   |
| Autonomy                                     | Hours          | 3     |

(\*) (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



# HIMOINSA

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## 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
- : 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                             | •     | •     | •     | •           |
| RS485                             | •     | •     | •     | •           |
| Modbus IP                         | •     | •     | •     | •           |
| Modbus                            | •     | •     | •     | •           |



## 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                    | •                    |



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## Generator set features

### Engine

- Oil temperature sensor
- 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 blower fan
- HTW sender
- LOP sender
- Electronic governor
- Hot parts protection
- Moving parts protection

### Alternator

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

### Electrical system

- Electric control and power panel with measurements devices and control unit (according to necessity and configuration)
- 4-pole thermal magnetic circuit breaker
- Connection panel wired to the safety protection (open thermal magnetic protection and alarm)
- Maintenance-free and anti-explosion battery
- Battery isolator
- Battery charger (standard on gensets with automatic control panels)
- Heating resistor (standard on sets with automatic control panels)
- Battery charger alternator with ground connection
- Starter battery/ies installed (cables and bracket included)
- Ground connection electrical installation with connection ready for ground spike (not supplied)

### Open set version

- Steel chassis
- Emergency stop button
- Oil sump extraction kit
- Anti-vibration shock absorbers
- Chassis with integrated fuel tank
- Fuel level gauge
- Fuel tank drain plug
- Optional :
  - Fuel transfer pump
  - Steel industrial silencer -15db(A) attenuation
  - Steel residential silencer -35db(A) attenuation.



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## PDF Summary

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