HIMOINSA
A YANMAR COMPANY

# HRYW-1275 D5/6

**RENTAL RANGE**
**Powered byYANMAR**




| SERVICE | | PRP/DCP 50Hz | PRP/DCP 60Hz | COP 50Hz | COP 60Hz |
|---|---|---|---|---|---|
| POWER | kVA | 1.285 | 1.310 | 889 | 902 |
| POWER | kW | 1.028 | 1.048 | 711 | 721 |
| RATED SPEED | r.p.m. | 1.500 | 1.800 | 1.500 | 1.800 |
| STANDARD VOLTAGE | V | 400/230 | 480/277 | 400/230 | 480/277 |
| AVAILABLE VOLTAGES | V | 380/220<br>415/240 | 416/240<br>440/245<br>460/265 | 380/220<br>415/240 | 416/240<br>440/245<br>460/265 |
| RATED AT POWER FACTOR | Cos Phi | 0,8 | | 0,8 | |

## RENTAL RANGE

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 2012/46/EU)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2018 normative: 1000 mbar, 25ºC, 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 24h of operation shall not exceed 70% of the PRP.
Overload not permitted.

Continuous Power (COP): According to Standard ISO 8528-1:2018, 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): 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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Manufacture facilities:
SPAIN • FRANCE • INDIA • CHINA • USA • BRAZIL • ARGENTINA

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

## CONTAINER

- 20FT
- WATER-COOLED
- THREE PHASE
- 50 Hz / 60 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.

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# Engine Specifications | 1.500 / 1.800 r.p.m.

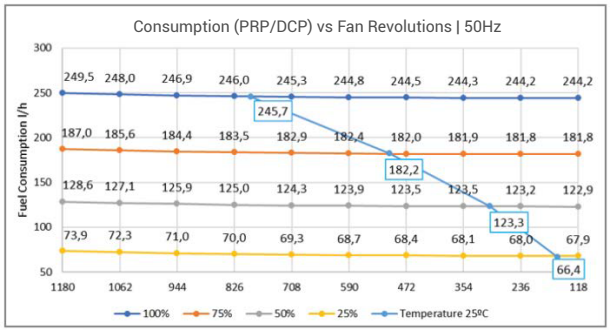
| | | 50Hz | 60Hz |
|---|---|---|---|
| Rated Output (PRP/DCP) | kW | 1.106 | 1.127 |
| Rated Output (COP) | kW | 774 | 789 |
| Manufacturer | | YANMAR | |
| Model | | AY40L.ET | |
| Engine Type | | 4-stroke diesel | |
| Injection Type | | Direct | |
| Aspiration Type | | Turbocharged and after-cooled | |
| Number of cylinders and arrangement | | 12-V | |
| Bore and Stroke | mm | 155 x 180 | |
| Displacement | L | 40,76 | |
| Cooling System | | Water | |
| Lube Oil Specifications | | API CF / CH-4; SAE 15W-40 | |
| Compression Ratio | | 14,35:1 | |

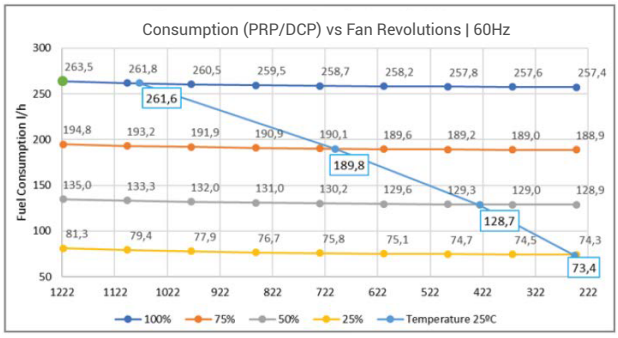
| | | 50Hz | 60Hz |
|---|---|---|---|
| Fuel Consumption 100%(PRP/DCP) | l/h | 245,7 | 261,6 |
| Fuel Consumption 75 % (PRP/DCP) | l/h | 182,2 | 189,8 |
| Fuel Consumption 50 % (PRP/DCP) | l/h | 123,3 | 128,7 |
| Fuel Consumption 25 % (PRP/DCP) | l/h | 66,4 | 73,4 |
| Fuel Consumption 100% (COP) | l/h | 177,1 | 184,2 |
| Lube oil consumption with full load | g/kWh | 0,75 | |
| Total oil capacity including tubes, filters | L | 190 | |
| Total coolant capacity | L | 359 | |
| Heat dissipated by coolant | kW | 651 | 723 |
| Governor | Type | Electronic | |
| Air Filter | Type | Dry | |
| Inner diameter exhaust pipe | mm | 205 | |

According to *ISO 3046-1,Ta=25ºC, Patm=100Kpa

- Low coolant level sensor
- Exhaust gas compensator
- Diesel engine
- 4-stroke cycle
- Water-cooled
- 24V electrical system
- Cyclonic air filter "heavy duty"
- Standard fuel filter
- Standard oil filter
- Radiator with pusher fan
- HTW & BPA sender s
- Oil temperature sensor
- Electronic governor
- Hot components and radiator guards
- Remote cooling radiator

*Optional: Water separator filter (visible level)*




# Generator Specifications | STAMFORD

| | | |
|---|---|---|
| Manufacturer | | STAMFORD |
| Model | | S7L1D.C4 |
| Poles | No. | 4 |
| Connection type (standard) | | Star |
| Mounting type | | S-00 21" |
| Insulation | Class | H class |

| | |
|---|---|
| Enclosure (according IEC-34-5) | IP23 |
| Steady Voltage Precision | Within +-1% |
| Exciter system | Self-excited, brushless |
| Voltage regulator | A.V.R. (Electronic) |
| Bracket type | Single bearing |
| Coupling system | Flexible disc |
| Coating type | Standard (Vacuum impregnation) |

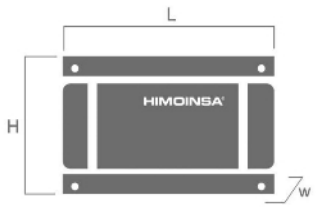
- Self-excited and self-regulated
- 4 poles
- AVR governor
- IP23 protection
- H class insulation



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## WEIGHT AND DIMENSIONS

| | | 50Hz | 60Hz |
|---|---|---|---|
| Length (L) | mm | 6.058 | |
| Height (H) | mm | 2.591 | |
| Width (W) | mm | 2.438 | |
| Maximum shipping volume | m³ | 38,27 | |
| Weight with liquids in radiator and sump | Kg | 15.680 | |
| Fuel tank capacity | L | 1.000 | |
| Autonomy | Hours | 8,1 | 7,8 |
| Sound pressure level | dB(A)@7m | 83 ± 2,4 | 84 ± 2,4 |




## APPLICATION DATA

### EXHAUST SYSTEM

| | | 1.500 rpm | 1.800 rpm |
|---|---|---|---|
| Maximum exhaust temperature | °C | 493 | 503 |
| Exhaust Gas Flow | m³/min | 241,8 | 256,8 |
| Maximum allowed back pressure | kPa | 6 | |

### NECESSARY AMOUNT OF AIR

| | | 1.500 rpm | 1.800 rpm |
|---|---|---|---|
| Intake air flow | m³/h | 6084 | 6300 |
| Cooling Air Flow | m³/s | 22,2 | 27,3 |
| Alternator fan air flow | m³/s | 2,69 | 3,45 |

### STARTING SYSTEM

| | | |
|---|---|---|
| Starting power | kW | 8 |
| Starting power | CV | 18,88 |
| Recommended battery | Ah | 300 |
| Auxiliary Voltage | Vdc | 24 |

### FUEL SYSTEM

| | | |
|---|---|---|
| Fuel | | Diesel |
| Fuel Oil Specifications | L | EN590,ASTM D975/2D equivalent |
| Fuel tank capacity | L | 1.000 |

## 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
- Steel chassis
- Manual oil extraction pump
- Robust construction designed for continuous or emergency applications
- Stainless steel fittings
- Three-way valve with quick connectors
- 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

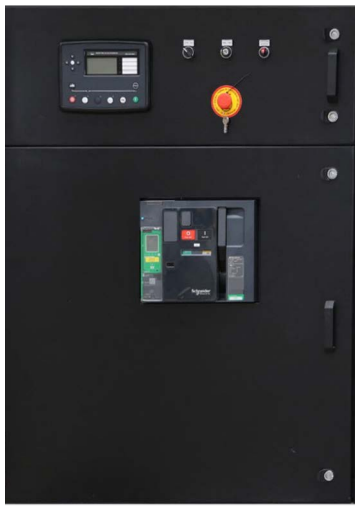
*Optional: 150L tank for automatic oil filling*


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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 device and controller (according to necessity and configuration), both fitted on the Genset.
- 4P automatic circuit breaker (one for each set) of suitable rated current completed with motorized driver 230Vac, opening coil MN12/24Vdc and aux. contacts.
- Earth leakage adjustable protection (time [inst 0,2 0,5 3 5 sec] & sensibility [30 300mA 3A])
- Battery Charger 3A 230Vac
- Engine water preheating



# CONTROL UNIT

The controller is an easy to use multi-generator loadshare system, designed to synchronise up to 32 generators including electronic and non-electronic engines. The controller 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 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 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 controller is ideal for a wide variety of demanding load share applications.



## Electrical System Container

- 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)
- 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
- Variable frequency drive for the radiator motor power supply
- Smoke detector with visual and acoustic alarm

*Optional: Heating resistor*


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# FEATURES OF THE CONTROL UNIT

## 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

# OPERATING MODE CONTROL UNIT

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.**


ISO 9001
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# ALARMS
## CONTROL UNIT

### ENGINE ALARMS:

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

### GENERATOR ALARMS:

- Over-load
- Unbalanced voltage
- Over voltage
- Under voltage
- Over frequency
- Under frequency
- Over load
- Short-circuit
- Inverse Power
- Incorrect phase sequence
- Asymmetry among phases
- Emergency stop

# READINGS
## CONTROL UNIT

### ENGINE READINGS:

- Coolant temperature
- Oil pressures
- 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 (kWAr)
- Power factor

# PROTECTIONS
## CONTROL UNIT

### 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

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