

Industrial Rental Towable Generator

Genset Ratings



Pictures may include optional equipment and/or accessories.
Generator available with or without trailer

 **Model: HRJW 460 T6**

Ratings Range - 60Hz Operation
1800 rpm Diesel

| | | |
|---------|-----|------------|
| Standby | kW | 405 |
| | kVA | 506 |
| Prime | kW | 369 |
| | kVA | 461 |

Sound Attenuation:
at 7m / 23 ft **79 dBA**



Key features

- HIPOWER rental generators are an efficient, reliable and versatile source of power designed to operate in the most extreme working conditions. An unique combination of innovative materials and design features combine for easy user operation and dependable power you can rely on.
- The Genset features a heavy-duty John Deere 4 cycle diesel engine certified by the Environmental Protection Agency (EPA) to conform to Tier 3 non-road emissions regulations, an AC high capability alternator regulated by a precise Automatic Voltage Regulator controlled and protected by our own auto-start CEM7 control panel available CANBUS communications including a powerful microprocessor and easy user programming. A heavy-duty constructed chassis supports the complete set. The generator is protected by a best-in-class sound attenuated enclosure designed for durability and extreme application.
- Engine - generating set tested to ISO 8528-5.
- The Genset engine is certified by the Environmental Protection Agency (EPA) Tier 3 non-road emissions regulations.
- The brushless, single bearing, 4 poles, 12-wire generator end, with automatic voltage regulator has broad range reconnectability.
- The Genset is CSA certified.
- Global product support.
- Operations and maintenance manuals.
- 1 Year Standard Warranty. Extended warranties are also available.



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Standard features

Engine

- Industrial grade Tier 3 John Deere diesel Engine, 4 stroke, water cooled, provided with:
- Electric start 12V. (24V optional)
- Radiator with pusher fan.
- Standard water separator visible level fuel filter.
- Secondary water separator fuel filter.
- J1939 stop the engine with ECU John Deere.
- Electronic engine governor.
- HWT/LOP senders.
- Heavy duty 2-stage air filter with service indicator.
- Hot & rotating components (exhaust, fan,...) protections and radiator guards.
- Oil drain hand pump
- Spin type fuel and oil filters.

Alternator

- Self excited, self regulated alternator.
- Insulation class H, IP23 Protection.
- Automatic Voltage Regulator (AVR) (+/-1 %).
- Vacuum impregnation.
- Permanent Magnet Generator (PMG).

Control Panel

- Digital microprocessor based control panel with remote start capability.
- CEM7 Auto-start control panel (2 wires).
- **Engine protections:** High coolant temperature **(A)**, High coolant temperature by sensor **(W)**, Low engine temperature by sensor **(W)**, Low oil pressure**(A)**, Low coolant level**(A)**, Unexpected shutdown, Fuel level **(W)**, Stop failure, Battery voltage failure **(W)**, Battery charging alternator failure **(W)**, Overspeed**(A)**, Underspeed**(A)**, Start failure, Emergency stop.

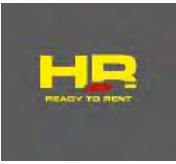
- **Alternator protections:** Over frequency **(A)**, Under frequency **(A)**, Over voltage **(A)**, Under Voltage **(A)**, Short-circuit**(A)**, Unbalanced voltage **(A)**, Incorrect phase sequence **(A)**, Reverse power **(A)**, Overload **(A)**.
- **Genset readings:** Voltage among phases, Voltage among phases and neutral, Amperage, Frequency, Apparent power(kVA), Active power (kW), Reactive power (kVA), Power factor.
- **Engine readings:** Fuel level(%), Battery voltage, R.P.M, Battery charge alternator voltage, Coolant temperature **(1)**, Oil pressure**(1)**.
- **Digital Metering:** Total hour counter, Partial hour counter, kW meter, Starts valid and Starts failure counters, Maintenance.
- **Communications (serial):** CANBUS - J1939 converter.
- **Communications (optional):** RS232, RS485, Modbus, CCLAN, Software for PC, Analog modem, GSM/GPRS modem, Remote screen, Tele-signal.
- **Other features:** Alarms history, External start, Start inhibition, Start under EJP normative, Pre-heating engine control, Genset contactor activation, Fuel transfer control, Engine temperature control, Manual Override, Programmable alarms, Genset start function in test mode, Programmable outputs, Magnetic Pick-up control.
- **Multilingual capability**
- Remote Communications to our **RAM7** Remote Annunciator Module **(optional)**.
- **NFPA110** Level Compatible.
- On/Off Switch.
- Emergency Stop Button.

NOTES :

- ★ All the protections are programmable to carry out "Warning Alarm without engine stop" or "Alarm with Engine Stop (with or without cooling cycle)".
- ★ **(A)** Alarm with Engine Stop.
- ★ **(W)** Warning Alarm without Engine Stop.
- ★ **(1)** Sensor installation necessary



Standard features



Power Panel

- 3P Main Line Circuit Breaker for overload protection (UL listed)/ CSA 22.2).
- Main bus / Hardwire connection panel with safety protection. (open thermal magnetic protection and alarm).
- Battery disconnect switch.
- Fuel cut-off solenoid and safety switches.

Control Panel BOX

- Voltage selector switch. Lockable, with 2 positions (3phase 277/480V - 3phase 120/208V).

Electric Equipment

- Battery charging alternator.
- Gel type, heavy-duty Starting battery(s) installed and connected to the engine include cables and rack.
- Ground connection prepared for ground spike (not supplied).

Chassis

- Heavy duty skid base with forklift pockets.
- Extended run time high capacity fuel tank.
- 110% spill containment for engine oil, coolant and fuel spills.
- Easy access for chassis cleaning and fast draining of fuel tank.
- Oversized chassis with forklift pockets for easy transport.
- Vibration isolators between chassis and generator.
- Internal fuel tank filling.
- Chassis ready for mobile kit installation. (see mobile kits options).

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Enclosure

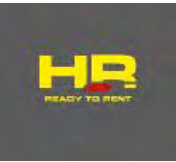
- Heavy duty sound attenuated canopy made with high quality 11 gauge steel.
- Powder coat paint which exceeds 1,000 hour salt spray test.
- Stainless steel hardware and fasteners.
- Ultra silent all weather enclosures with Rock-Wool insulation and curved edges with minimum outside fasteners.
- Reinforced Single eye lifting point.
- Emergency stops (double protection for emergency stop; inside on control panel + external on canopy).
- Door with window to view control panel.
- Easy access to radiator fill through roof on enclosure.

Exhaust

- Steel residential silencer of -35dBA attenuation, with rain cap.



Optional features



Engine (optional)

- Water Jacket Heater
- Low coolant level sensor.
- Secondary water separator fuel filter - RACOR type (Decanting filter with water detection kit, alarm signal and sensor contact).
- Heavy duty, three stage air filter with service indicator.

Alternator (optional)

- Anti-condensation heater.

Electric Equipment (optional)

- Battery isolator.
- Automatic battery chargers.

Power Panel (optional)

- MPS - Multiple Parallel System.
- Multiple genset paralleling in two different voltages. (120/208V 3Ph or 277/480V 3Ph) achieved through the voltage selector switch.

Control Panel BOX (optional)

- Camlocks.

Electronics (optional)

- Remote Annunciator Module RAM7 to meet NFPA 110 installation.
- Digital timer.
- CANBUS - LAN, converter.
- CANBUS - USB, converter.
- Communication modules for tele-control.
- Transfer switch and MPS paralleling control panel.

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- Multiple remote annunciation options (CAN/USB, GSM, RS232, RS485, remote screen, tele-signal..).

Chassis (optional)

- Oil field type skid.
- Leakage detector sensor.

Fuel System (optional)

- Three way fuel valve with quick disconnect fittings.
- Automatic fuel transfer pump.

Trailers (optional)

- Road towing trailers to DOT standards.

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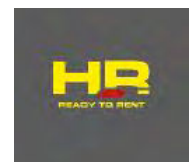

Model: HRJW 460 T6

| GENSET RATING | | | | | | | | | | | |
|---------------|-----------------|------------------|-------------|----|----|---------------------------|-----|----------|-------------------------|-----|----------|
| GENSET Model | ENGINE Model | ALTERNATOR Model | VOLTAGE L-L | Ph | Hz | 150°C RISE STANDBY RATING | | | 125°C RISE PRIME RATING | | |
| | | | | | | kW | kVA | Amps L-L | kW | kVA | Amps L-L |
| HRJW 460 T6 | 6135HF485 - 460 | HCI 444 F | 208 | 3 | 60 | 388 | 485 | 1346 | 364 | 455 | 1263 |
| | | | 240 | 3 | 60 | 405 | 506 | 1218 | 369 | 461 | 1110 |
| | | | 480 | 3 | 60 | 405 | 506 | 609 | 369 | 461 | 555 |

| ENGINE SPECIFICATIONS | | | |
|-------------------------|-----------|--------------------------------|-------------|
| Manufacturer | | JOHN DEERE | |
| Engine model | | 6135HF485 -460 | |
| EPA Certification for: | Stage | Tier 3 | |
| Rated | RPM | 1800 | |
| Nominal Power (PRIME) | kW - HP | 419 | 561 |
| Nominal Power (STANDBY) | kW - HP | 460 | 617 |
| Engine type | | Diesel 4 stroke | |
| Inyection type | | UNIT INJECTION | |
| Aspiration type | | TURBOCHARGED | |
| Cylinder arrangement | | 6 - L | |
| Bore and stroke | (mm) - In | (132 x 165) | 5,20 x 6,50 |
| Displacement | L - in3 | 13.5 | 824 |
| Cooling system | | Liquid (Cool-Gard) | |
| Governor Type | | electronic | |
| Make | | c | |
| Standard | | c | |
| Starting voltage | Vcc | 12* | |
| Air cleaner type | | Medium duty w/double cartridge | |
| Compression ratio | | 16.0 : 1 | |

| AMPERAGE | |
|----------------------------------|-----------|
| 3 Phase 208V | 1263 Amps |
| 3 Phase 240V | 1110 Amps |
| 3 Phase 480V | 555 Amps |
| Main Line Circuit Breaker Rating | 1600 Amps |

| ALTERNATOR SPECIFICATIONS | |
|--|--------------------------------|
| Manufacturer | Stamford |
| Model (480V) | HCI 444 F |
| Alternator Type | 4 poles, rotating field |
| Excitation system | |
| Exciter Type | PMG |
| Leads: quantity, type | 12, reconnectable |
| Stator Pitch | 2/3 |
| Insulation system | |
| Material | Class H |
| Temperature rise | 150°C Standby 125°C Prime |
| Bearing: quantity, type | Single bearing sealed |
| Coupling | Flexible disc |
| Amortisseur windings | Full |
| Automatic Voltage regulator | |
| PMG regulator or EBS | MX341, Opt MX321 |
| Voltage regulation, no load to full load | |
| PMG regulator | +/-1%, +/- 0.5% |
| Load acceptance | 100% of rated standby current |
| Unbalanced load capability | 20% of standby rating |
| Subtransient Reactance | |
| 480V | 11% |
| TIF | <50 |
| Line Harmonics | 5% Maximum |
| Peak motor starting kVA: | 30% dip |
| 480V | PMG excited MX series- 1275kVA |



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| ELECTRICAL SYSTEM | | 12V |
|----------------------------------|-----|----------|
| Battery charging alternator: | | |
| Ground (negative/positive) | | Negative |
| Volts (DC) | V | 12 |
| Ampere rating | Amp | 90 |
| Starter motor rated voltage (DC) | V | 24 |
| Starter motor rated | kW | 2.03 |
| Starter motor rated | HP | 2.76 |
| Battery recommendations | | |
| Quantity & Min. Amps rating | Amp | 200 |
| Min. Cold Cranking Amps | Amp | 1900 |
| Battery Voltage (DC) | V | 12 |

| FUEL SYSTEM | | |
|---------------------------|---------------|---------------|
| Recommended fuel | | #2 Diesel |
| Fuel supply line. min. ID | mm - in | 13 - 0.5 |
| Fuel return line. min. ID | mm - in | 10 - 0.38 |
| Fuel pump Type | | Engine Driven |
| Max. Lift fuel pump | m - ft | 3 - 1 |
| Max. Flow to pump | (l/h) - gal/h | 179.8 - 47.5 |
| Fuel filter | | |
| Secondary filter | | 2µm |
| Secondary Water Separator | | Included |
| Primary filter | | 10µm |
| Primary Water Separator | | Included |

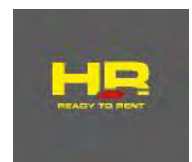
| | | PRIME | | STANDBY | |
|-----------|-------------|-------|-------|---------|-------|
| | | l/h | gal/h | l/h | gal/h |
| 100% Load | l/h - gal/h | 100.9 | 26.6 | 115.3 | 30.5 |
| 75% Load | l/h - gal/h | 74.8 | 19.7 | 83.5 | 22.0 |
| 50% Load | l/h - gal/h | 51.9 | 13.7 | 57.6 | 15.2 |
| 25% Load | l/h - gal/h | 29.5 | 7.8 | 31.8 | 8.4 |

| EXHAUST SYSTEM | | PRIME | STANDBY |
|---------------------------------|---------------------|------------------|------------------|
| Exhaust manifold type | | Dry | Dry |
| Exhaust outlet diameter | | | |
| Sound Attenuated version | mm - In | 160 - 6.304 | |
| Max. Exhaust temp. at full load | °C | 427 | 471 |
| | °F | 801 | 880 |
| Exhaust Gas Flow | kg/h - Lb/h | 1839.9 - 4056.28 | 2041.2 - 4500.07 |
| | (m3/min) - ft3/min | (73) - 2578 | (81) - 2860 |
| Evacuated by the exhaust heat | kcal/kWh - kcal/kWh | 0.00 | 663.82 |
| Maximum allowed back pressure | (mm/H2O) - inH2O | 1016 | 40 |
| | (kPa) - inH2O | 10.0 | 40 |

| COOLING SYSTEM | | |
|--|------------------|--------------------|
| Engine cooling air flow | m3/s - ft3/s | 13.7 - 483.6 |
| Generator cooling air flow | m3/min - ft3/min | 59.4 - 2,097.7 |
| Total cooling air flow (engine + generator + combustion) | | |
| Sound Attenuated version | m3/min - ft3/min | 1,831.0 - 64,661.2 |
| Total cooling capacity | l - gal | 2,380.0 - 84,048.9 |
| Antifreeze recommended | l - gal | 65.0 - 17.2 |

| LUBRICATION SYSTEM | | |
|------------------------------------|-------------|---------------|
| Oil Filter: quantity, type | | 1 x Cartridge |
| Oil pan capacity | l - gal | 50 - 13.2 |
| Oil pan capacity with filter | l - gal | 40 - 10.6 |
| Oil cooler | | Water Cooled |
| Recommended Oil | | Cool-Gard II |
| Specific oil consumption full load | % fuel | <0,1% |
| Oil Press | (psi) - kPA | 42 - 287.0 |

| VENTILATION REQUIREMENTS | | |
|---|--------------|--------------|
| Air requirement for combustion at 100% load/rated speed | m3/h - ft3/h | 2040 - 72060 |
| Cooling airflow | m3/h - ft3/h | - - - |
| Heat rejected to ambient: | | |
| From engine | kW - btu/min | 231 - 13148 |
| From alternator | kW - btu/min | 5 - 284.55 |



Control & Power Panel

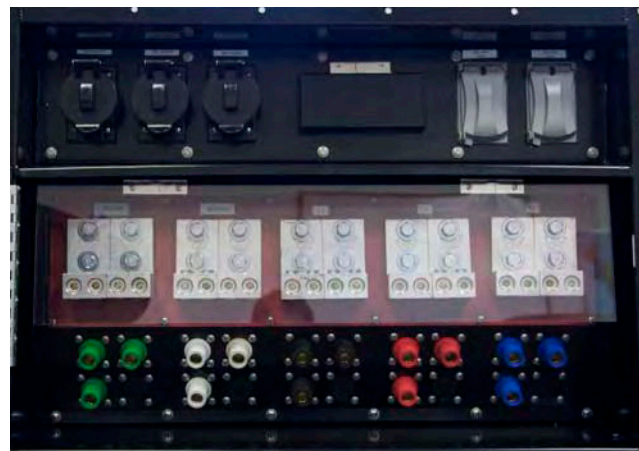
1. **CM Control Panel.**
 - ✓ CEM7 Auto-start control panel.
 - ✓ On/Off Switch..
 - ✓ Emergency Stop.
2. **CP Power Panel.**
 - ✓ Main Line Circuit Breaker for overload protection (UL listed / CSA22.2).
 - ✓ Main bus /hardwire connection panel with safety protection.
 - ✓ Fuel cut-off solenoid and safety switches



Pictures may include optional equipment and/or accessories.

Distribution Panel

1. **Auxiliary socket box IP67 with:**
 - ✓ Individual breaker protection for sockets.
 - ✓ 2 GFCI duplex 20A 125VGFI for 110v duplex.
 - ✓ 3 TWIST-LOCK 50A 2P+N + G.
 - ✓ Secondary Main bus / hardwire connection (Load lugs).
 - ✓ Camlocks. (optional)

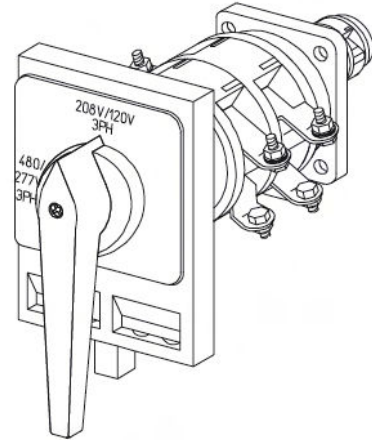


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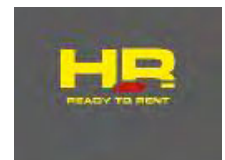
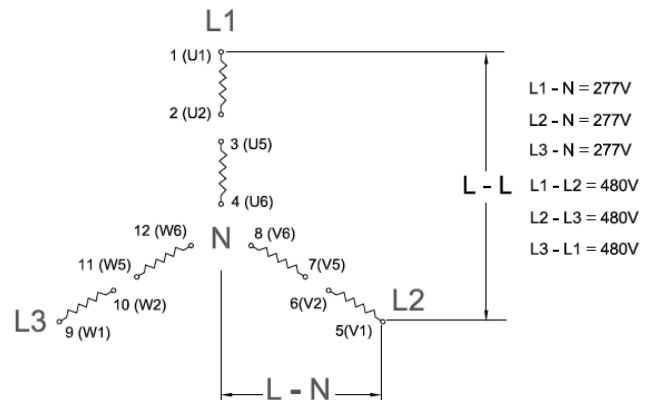
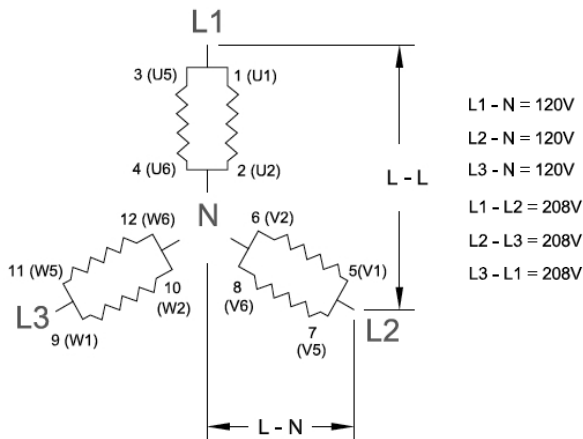
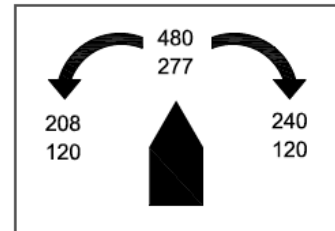
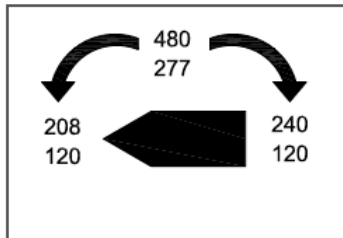
Voltage Selector Switch

1. Voltage selector switch 2 positions padlockable (12h / 09h).
- ✓ High (Series) Wye 480/277V 3Ph Y.
- ✓ Low (Parallel) Wye 208/120V 3Ph YY.
2. 9 contact stages, 18 contacts.
3. Switching angle 90°.



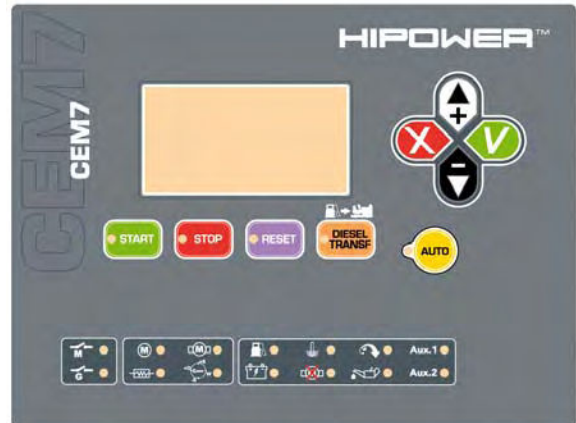
AC Generator Stator Winding connectd for
3Phase Low Wye:208/120 VAC 60Hz

AC Generator Stator Winding connectd for
3Phase Low Wye:480/277 VAC 60Hz



CEM7 Auto-start control panel

1. Voltage between each Phase & Neutral.
2. Voltage between Phases.
3. Current (Amps) on each Phase.
4. Frequency.
5. Active, Apparent & Reactive Power.
6. Power Factor.
7. Instant Power (kWH) and Accumulative power (day, month & year).
8. Fuel reserve.
9. Oil pressure, coolant temperature.
10. Battery voltage.
11. Battery charging alternator voltage.
12. Engine Speed.
13. Hours running (total & partial).



NOTES :

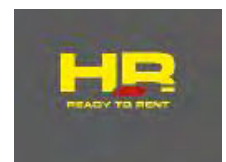
- ★ All the protections are programmable to carry out "Warning Alarm without engine stop" or "Alarm with Engine Stop (with or without cooling cycle)".
- ★ (A) Alarm with Engine Stop.
- ★ (W) Warning Alarm without Engine Stop.
- ★ (1) Sensor installation necessary.

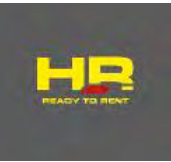
Engine Alarms

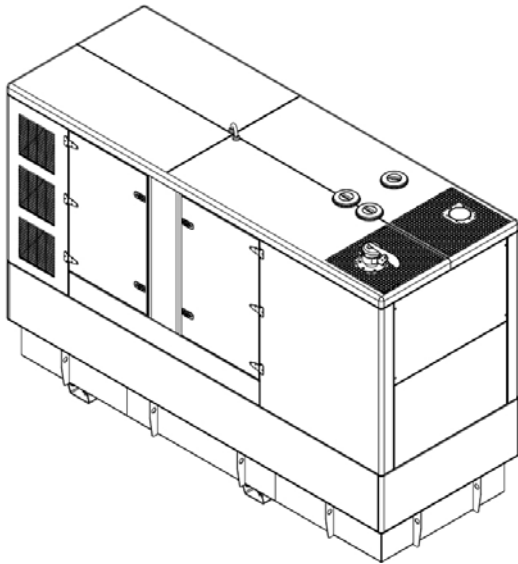
1. High coolant temperature (A).
2. Low oil pressure (A).
3. Low coolant level (A).
4. Unexpected shutdown.
5. Low fuel level (W).
6. Stop failure.
7. Battery voltage failure (W).
8. Battery charging alternator failure (W).
9. Overspeed (A).
10. Under-speed (A).
11. Start failure.
12. Emergency stop.


Generators Alarms

1. Over-load (A).
2. Unbalanced voltage (A).
3. Over voltage (A).
4. Under voltage (A).
5. Over frequency (A).
6. Under frequency (A).
7. Short-circuit (A).
8. Reverse Power (A).
9. Incorrect phase sequence (A).

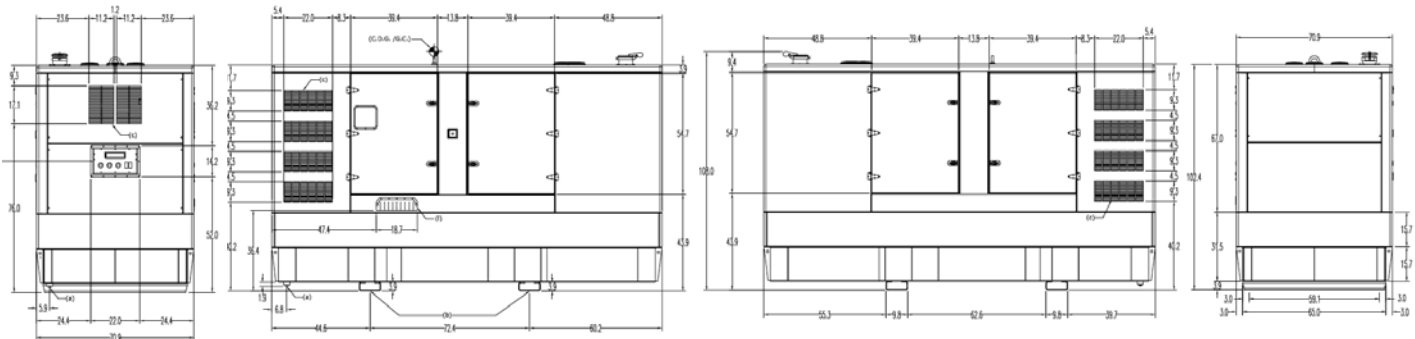



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| | | | | |
|------------------------------------|---|----------------------|-------|------|
| Enclosure model | H1 | | | |
| | (Length x Width x Height) | | | |
| Overall size (L x W x H) | in | 177.2 x 70.9 x 107.9 | | |
| | mm | 4500 x 1800 x 2740 | | |
| Dry weight (with std. accessories) | Lb | Kg | 13090 | 5937 |
| |  | | | |
| Trailer size (L x W x H) | in | - | | |
| | mm | - | | |
| Trailer weight | Lb | Kg | - | - |
| | | | | |
| Fuel Tank Capacity | Gal | L | 554.4 | 2100 |
| | | | | |
| Run Time (Hr) | 100% | 75% | 50% | 25% |
| | 20.8 | 28.1 | 40.5 | 71.2 |

NOTE: The drawings are only representative of the overall dimensions.
 For full detailed drawings please consult your local distributor or contact Himoina Power Systems www.hipowersystems.com



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