

60Hz POWER RATINGS

| Voltage AC | Phase | PF | Standby | | Prime* | |
|------------|-------|-----|---------|------|--------|------|
| | | | KW | A | Kw | A |
| 120/208 | 3 | 0.8 | 800 | 2776 | 724 | 2512 |
| 120/240 | 3 | 0.8 | 800 | 2406 | 724 | 2177 |
| 277/480 | 3 | 0.8 | 803 | 1207 | 726 | 1092 |
| 347/600 | 3 | 0.8 | 798 | 960 | 723 | 869 |

* Prime power rating for reference only.

Overview of the SIMMAX series of Industrial Generator Sets

Simson-Maxwell generators are factory-built in facilities that utilize the latest technology, mechanical and electrical component assembly, production, and testing. Each model is the result of computer-aided design and modeling backed up by exhaustive prototype-testing. Our development technology results in a unique range of innovative designs for highly reliable generator sets backed-up by a comprehensive warranty covering all components.

Standard Configuration of Industrial Sets

- Long-life, heavy-duty, 4-cycle, direct injection diesel engine from a world-renowned manufacturer for economy of operation and maximum reliability and durability. Capable of full-rated load acceptance in one step.
- Cooling: Radiator with belt driven pusher fan.
- Filtration: Heavy duty replaceable element air-cleaner.
- Alternator: Single bearing, 4-pole, rotating field, self-excited, self-ventilated, 12-wire re-connectable (6-wire dedicated for 600V), 60Hz brushless alternator with Class H insulation. Automatic voltage regulator (AVR) providing close voltage regulation.
- Arrangement: Open skid with engine and alternator units close coupled together and with seismic anti-vibration isolators mounted between the assembly and a heavy-duty steel base. Lifting lugs are provided as per application.
- Auto Start Control Panel: Digital auto-start microprocessor based control panel with remote start capability.
- Starting System: Electric starter motor, battery cables, battery and belt driven charging alternator.
- CSA certified and meets CSA C282 requirements.

SIMMAX



**POWER
GENERATION**

DIESEL PRODUCT LINE

SPW780 T6-T1

120/240/208/480/600 Volts
60 Hz/1800 RPM | Standby/Prime

ENGINE SPECIFICATION

| | |
|--------------------------|------------------------------|
| Manufacturer | Perkins |
| Model | 4008-TAG1 |
| EPA certified | Tier-1 |
| Crank shaft speed: rpm | 1800 |
| Fuel type | Diesel |
| Injection | Direct |
| Aspiration | Turbocharged |
| Number of cylinder | 8 |
| Cylinder arrangement | Inline |
| Displacement: L | 30.561 |
| Bore: mm | 160 |
| Stroke: mm | 190 |
| Engine standby power: kW | 843.0 |
| Engine prime power: kW | 763.0 |
| Cooling | Water cooled |
| Governor | Electronic |
| Starting motor voltage | 24V DC |
| Compression ration | 13.6:1 |
| Air cleaner type | Single stage-Paper Cartridge |

EXHAUST SYSTEM

| | |
|---------------------------------------------|--------------------|
| Maximum engine exhaust temperature: °F (°C) | 914 (490) |
| Exhaust gas flow: CFM (m3/hr) | 7311.0 (12421.5) |
| Max. permissible back pressure: PSI (kPA) | 1.538 (10.6) |

COOLING SYSTEM

| | | |
|------------------------------------------------|-------------------|-------------------------------|
| Radiator cooling air flow: CFM (m3/hr) | 41954 (71281) | @Max 40°C ambient temperature |
| Max. restriction of cooling air: in.w.g. (kPA) | 1.206 (0.3) | |
| Engine combustion air flow: CFM (m3/hr) | 2614 (4442) | |
| Total intake air requirement: CFM (m3/hr) | 44568 (75721.6) | |
| Total coolant capacity: Litre | 162 | |

HEAT BALANCE

| | |
|---------------------------------------------|-------|
| Heat at rejection to coolant: kW | 547.0 |
| Heat at rejection radiation from engine: kW | 87.0 |
| Heat at rejection to engine exhaust: kW | 727.0 |

LUBRICATION SYSTEM

| | |
|----------------------------------------|----------------------|
| Oil pan capacity: Litre | 165.5 |
| Oil pan capacity with filter: Litre | 213.0 |
| Oil cooler | Integrated full flow |
| Recommended lubricating oil grade | APICD or MIL-L-2104C |
| Oil consumption at full load: Litre/hr | 0.47 |
| Oil pressure: PSI (kPA) | 39.2 (270) |

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ENGINE ELECTRICAL SYSTEM

| | |
|------------------------|------------------|
| Starting motor voltage | 24V DC |
| Battery capacity | 2X4D, 24V, 1000A |
| Cranking Amps minimum | 750 A at 0 °C |

FUEL SYSTEM

| | |
|----------------------------------------|----------------------|
| Recommended fuel | BS2869 class A1, A2. |
| Fuel supply line, min. ID: mm | 15.0 |
| Fuel return line min. ID: mm | 15.0 |
| Fuel supply line max. restriction: kpa | 20.85 |
| Fuel pump type | Engine-driven |
| Fuel filter | Fuel filter: 0.010mm |

FUEL CONSUMPTION

| | Standby Power | | Prime Power |
|-----------------------------|---------------|---------------------------|-------------|
| 100% Load Standby: Litre/hr | 224.0 | 100% Load Prime: Litre/hr | 201.0 |
| 75% Load Standby: Litre/hr | 145.0 | 75% Load Prime: Litre/hr | 131.8 |
| 50% Load Standby: Litre/hr | 97.0 | 50% Load Prime: Litre/hr | 88.2 |
| 25% Load Standby: Litre/hr | - | 25% Load Prime: Litre/hr | - |

ALTERNATOR SPECIFICATION

| | |
|--------------------------------------------------------|--------------------------------------------------------------|
| Alternator manufacturer | STAMFORD |
| Alternator model | HCI634 |
| Voltage | 120V - 480V, 600V |
| Alternator type | Four pole, Rotating field |
| Excitation system | Brushless, PMG (MX321) |
| Power factor | 0.8 |
| Number of leads | 12 leads reconnectable (120V-480V), 6 leads dedicated (600V) |
| Stator pitch | 2/3 |
| Insulation | Class H |
| Windings - temperature rise / Ambient °C | 125 / 40 |
| Enclosure rating | IP23 |
| Bearing | Single, Sealed |
| Amortisseur windings | Full |
| Voltage regulation - no load to full load with DSR AVR | ± 0.5% |
| TIF | <50 |
| Line harmonics | 5% MAXIMUM |
| Alternator cooling air flow: CFM (m3/hr) | 4156 (7062) |

STANDARD FEATURES

| | |
|-------------------------------------------------|---------------------------------------------------------|
| • Radiator with pusher fan | • Standard fuel filter |
| • Medium-duty, Single stage-Paper Cartridge | • All rotating components protected with metal guards |
| • Heavy-duty engine start batteries with cables | • Operation and installation literature |
| • Emergency stop switch | • CSA certified |
| • Control Panel (See next page for details) | • Steel base for mounting on fuel tank/concrete surface |

OPTIONAL FEATURE: SUB-BASE FUEL TANK *

| Runtime | 24 hour | 48 hour | 72 hour |
|-----------------------------|-----------------|----------------|----------------|
| Tank volume - US gal (L) | 1420.2 (5376) | 2840.4 (10752) | 4260.6 (16128) |
| Tank size: L x W x H - inch | 191 x 75 x 27 | 197 x 88 x 40 | 197 x 131 x 40 |
| Tank size: L x W x H - m | 4.9 x 1.9 x 0.7 | 5 x 2.3 x 1 | 5 x 3.4 x 1 |

* All measurements are approximate and for estimation purposes only. The tank dimensions may vary. For specific sizes, contact sales representative.

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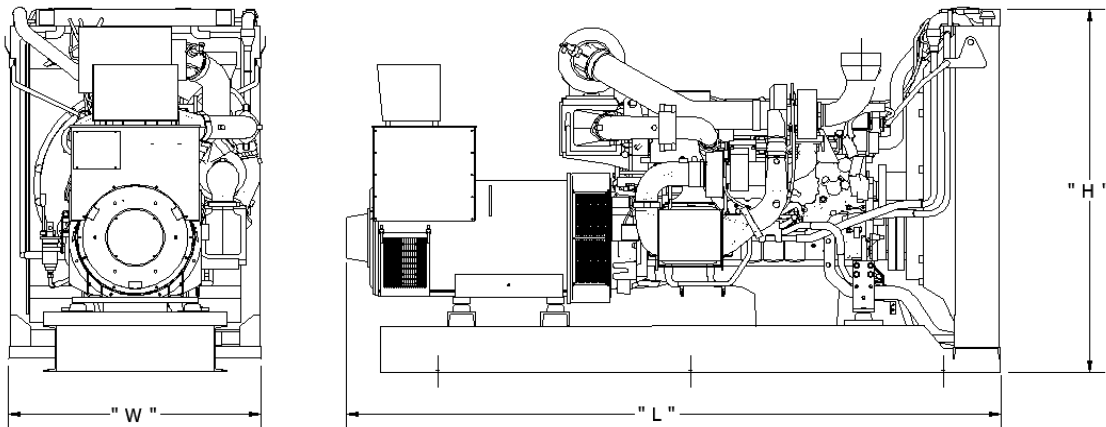
Control Systems Standard Features - Generator Digital Control Panel

Standard Configuration of Control Systems

- Numerous control systems available, depending on customer requirements
- Automatic or manual start/stop
- Pre-lube function with timers
- Adjustable crank attempts
- Engine warm up/cooling functions
- Digital metering with alarms and shutdowns
- LCD display
- LED indicators
- In-built PLC function
- RS232 (optional RS485 or CAN) communication
- Data logging up to 350 events
- Password protection



Key dimensions and Weights



| GENERATOR DATA * | | | |
|------------------------|-----------------------|------------------------|-----------------------|
| L = LENGTH - inch (mm) | W = WIDTH - inch (mm) | H = HEIGHT - inch (mm) | DRY WEIGHT - lbs (kg) |
| 190 (4826) | 74 (1879.6) | 94.0 (2387.6) | 13113.1 (5947) |

* All measurements are approximate and for estimation purposes only. Images are reference only.
 Any deviation can change dimensions.
 Materials and specifications subject to change without notice.



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