

## 60Hz POWER RATINGS

Voltage AC	Phase	PF	Standby		Prime*	
			KW	A	Kw	A
120/240	1	1	105	439	96	399
120/208	3	0.8	108	375	98	341
277/480	3	0.8	109	164	99	149
347/600	3	0.8	109	131	99	119

\* 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

**SPW100 T6-T2**

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

### ENGINE SPECIFICATION

Manufacturer	Perkins
Model	1104C-44TAG2
EPA certified	Tier-2
Crank shaft speed: rpm	1800
Fuel type	Diesel
Injection	Direct
Aspiration	Turbocharged
Number of cylinder	4
Cylinder arrangement	Inline
Displacement: L	4.4
Bore: mm	105
Stroke: mm	127
Engine standby power: kW	117.5
Engine prime power: kW	106.8
Cooling	Water cooled
Governor	Electronic-LCS
Starting motor voltage	24V DC
Compression ration	18.23:1
Air cleaner type	Double stage with cyclone

### EXHAUST SYSTEM

Maximum engine exhaust temperature: °F (°C)	1065.2 ( 574 )
Exhaust gas flow: CFM (m3/hr)	721.0 ( 1225 )
Max. permissible back pressure: PSI (kPA)	2.176 ( 15 )

### COOLING SYSTEM

Radiator cooling air flow: CFM (m3/hr)	9040 ( 15360 )	@Max 40°C ambient temperature
Max. restriction of cooling air: in.w.g. (kPA)	0.804 ( 0.2 )	
Engine combustion air flow: CFM (m3/hr)	276 ( 469 )	
Total intake air requirement: CFM (m3/hr)	9316 ( 15828 )	
Total coolant capacity: Litre	12.6	

### HEAT BALANCE

Heat at rejection to coolant: kW	64.0
Heat at rejection radiation from engine: kW	9.4
Heat at rejection to engine exhaust: kW	99.7

### LUBRICATION SYSTEM

Oil pan capacity: Litre	7.0
Oil pan capacity with filter: Litre	8.0
Oil cooler	Integrated full flow
Recommended lubricating oil grade	Multigrade oil that confirms to API-CC/SE or CCMC-D1
Oil consumption at full load: Litre/hr	0.04
Oil pressure: PSI (kPA)	63.9 ( 440 )

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### ENGINE ELECTRICAL SYSTEM

Starting motor voltage	24V DC
Battery capacity	4D, 12V, 1000A
Cranking Amps minimum	541 A at +20 °C

### FUEL SYSTEM

Recommended fuel	USA Fed Off Highway EPA2D 89.330-96
Fuel supply line, min. ID: mm	15.0
Fuel return line min. ID: mm	15.0
Fuel supply line max. restriction: kpa	17
Fuel pump type	Engine-driven
Fuel filter	Fuel filter: 0.002mm

### FUEL CONSUMPTION

	Standby Power		Prime Power
100% Load Standby: Litre/hr	26.9	100% Load Prime: Litre/hr	24.5
75% Load Standby: Litre/hr	20.2	75% Load Prime: Litre/hr	18.4
50% Load Standby: Litre/hr	14.1	50% Load Prime: Litre/hr	12.8
25% Load Standby: Litre/hr	-	25% Load Prime: Litre/hr	-

### ALTERNATOR SPECIFICATION

Alternator manufacturer	STAMFORD
Alternator model	UCI274
Voltage	120V - 480V, 600V
Alternator type	Four pole, Rotating field
Excitation system	Brushless, Self excited (PMG option available)
Power factor	0.8
Number of leads	12 leads reconnectable (120V-480V-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	± 1%
TIF	<50
Line harmonics	5% MAXIMUM
Alternator cooling air flow: CFM (m3/hr)	1308 ( 2223 )

### STANDARD FEATURES

• Radiator with pusher fan	• Standard fuel filter
• Medium-duty, Double stage with cyclone	• 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)	170.6 (645.6)	341.1 (1291.2)	511.7 (1936.8)
Tank size: L x W x H - inch	83 x 31 x 19	83 x 31 x 34	103 x 31 x 40
Tank size: L x W x H - m	2.1 x 0.8 x 0.5	2.1 x 0.8 x 0.9	2.7 x 0.8 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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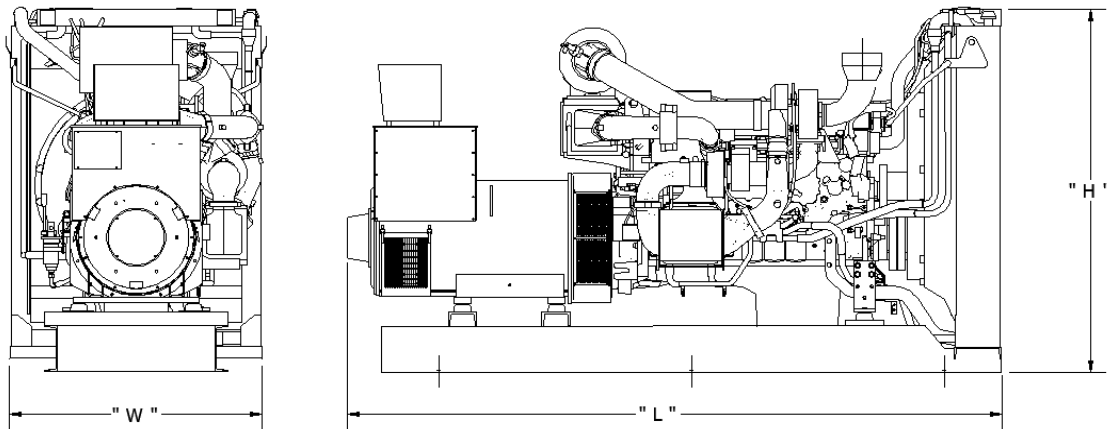
### Control Systems Standard Features - Generator Digital Control Panel

#### 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)
82.5 ( 2095.5 )	30 ( 762 )	50.0 ( 1270 )	2593.1 ( 1176 )

\* 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.



Simson Maxwell

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