

### 60Hz POWER RATINGS

Voltage AC	Phase	PF	Standby		Prime*	
			KW	A	Kw	A
277/480	3	0.8	1523	2290	1385	2083
347/600	3	0.8	1523	1832	1385	1666
2402/4160	3	0.8	1523	264	1385	240

\* 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.

#### ENGINE SPECIFICATION

Manufacturer	Perkins
Model	4012-46 TAG3A
EPA certified	Tier-1
Crank shaft speed: rpm	1800
Fuel type	Diesel
Injection	Direct
Aspiration	Turbocharged
Number of cylinder	12
Cylinder arrangement	60°V
Displacement: L	45.842
Bore: mm	160
Stroke: mm	190
Engine standby power: kW	1583.0
Engine prime power: kW	1440.0
Cooling	Water cooled
Governor	Electronic
Starting motor voltage	24V DC
Compression ration	13.1:2
Air cleaner type	Single stage-Paper Cartridge

#### EXHAUST SYSTEM

Maximum engine exhaust temperature: °F (°C)	813.2 ( 434 )
Exhaust gas flow: CFM (m3/hr)	11865.0 ( 20158.8 )
Max. permissible back pressure: PSI (kPA)	0.726 ( 5 )

#### COOLING SYSTEM

Radiator cooling air flow: CFM (m3/hr)	76280 ( 129601 )	@Max 40°C ambient temperature
Max. restriction of cooling air: in.w.g. (kPA)	0.483 ( 0.2 )	
Engine combustion air flow: CFM (m3/hr)	5121 ( 8701 )	
Total intake air requirement: CFM (m3/hr)	81401 ( 138301.2 )	
Total coolant capacity: Litre	225	

#### HEAT BALANCE

Heat at rejection to coolant: kW	586.0
Heat at rejection radiation from engine: kW	108.0
Heat at rejection to engine exhaust: kW	1287.0

#### LUBRICATION SYSTEM

Oil pan capacity: Litre	157.5
Oil pan capacity with filter: Litre	177.0
Oil cooler	Integrated full flow
Recommended lubricating oil grade	APICD or MIL-L-2104C
Oil consumption at full load: Litre/hr	0.78
Oil pressure: PSI (kPA)	39.2 ( 270 )

# SIMMAX



**POWER  
GENERATION**

## DIESEL PRODUCT LINE

**SPW1500 T6-T1**

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

### ENGINE ELECTRICAL SYSTEM

Starting motor voltage	24V DC
Battery capacity	2X8D, 24V, 1500A
Cranking Amps minimum	1200 A at 0 °C

### FUEL SYSTEM

Recommended fuel	BS2869 class A1, A2.
Fuel supply line, min. ID: mm	25.0
Fuel return line min. ID: mm	25.0
Fuel supply line max. restriction: kpa	20
Fuel pump type	Engine-driven
Fuel filter	Fuel filter: 0.010mm

### FUEL CONSUMPTION

	Standby Power	Prime Power
100% Load Standby: Litre/hr	390.0	100% Load Prime: Litre/hr 356.0
75% Load Standby: Litre/hr	277.0	75% Load Prime: Litre/hr 251.8
50% Load Standby: Litre/hr	185.0	50% Load Prime: Litre/hr 168.2
25% Load Standby: Litre/hr	-	25% Load Prime: Litre/hr -

### ALTERNATOR SPECIFICATION

Alternator manufacturer	STAMFORD
Alternator model	PI734
Voltage	480V, 600V
Alternator type	Four pole, Rotating field
Excitation system	Brushless, PMG (MX321)
Power factor	0.8
Number of leads	6 leads dedicated (277V-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)	7300 ( 12403 )

### 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)	2472.7 (9360)	4945.3 (18720)	7417.9 (28080)
Tank size: L x W x H - inch	216 x 88 x 34	276 x 109 x 40	276 x 162 x 40
Tank size: L x W x H - m	5.5 x 2.3 x 0.9	7 x 2.8 x 1	7 x 4.1 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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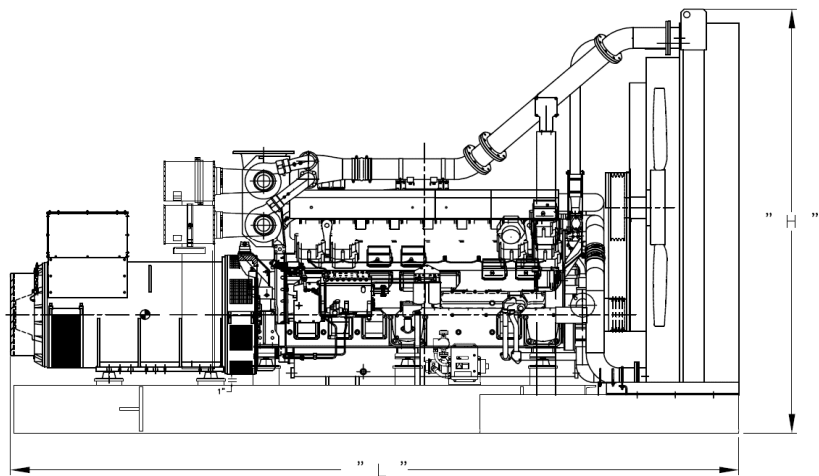
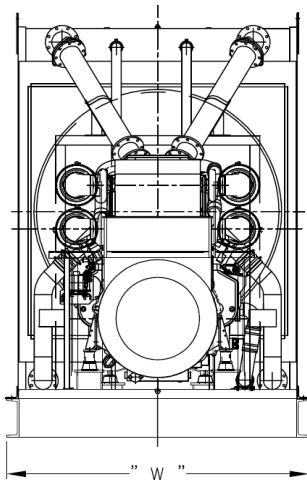
### Control Systems Standard Features - Generator Digital Control Panel

#### 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)
215 ( 5461 )	87 ( 2209.8 )	100.0 ( 2540 )	21476.7 ( 9740 )

\* 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

Calgary | Edmonton | Nanaimo | Port Coquitlam | Prince George | Terrace | Ft. St. John

www.simson-maxwell.com | 800-374-6766

