

### 60Hz POWER RATINGS

Voltage AC	Phase	PF	Standby		Prime*	
			KW	A	Kw	A
277/480	3	0.8	1295	1947	1172	1763
347/600	3	0.8	1295	1557	1172	1410
2402/4160	3	0.8	1295	225	1172	203

\* 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

**SMW1250 T6-T1**  
120/240/208/480/600 Volts  
60 Hz/1800 RPM | Standby/Prime

### ENGINE SPECIFICATION

Manufacturer	Mitsubishi
Model	S12RY1PTA-2
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	49.03
Bore: mm	170
Stroke: mm	180
Engine standby power: kW	1353.0
Engine prime power: kW	1225.0
Cooling	Water cooled
Governor	Electronic
Starting motor voltage	24V DC
Compression ration	15.0:1
Air cleaner type	Not Included

### EXHAUST SYSTEM

Maximum engine exhaust temperature: °F (°C)	939.2 ( 504 )
Exhaust gas flow: CFM (m3/hr)	11794.0 ( 20038.2 )
Max. permissible back pressure: PSI (kPA)	0.856 ( 5.9 )

### COOLING SYSTEM

Radiator cooling air flow: CFM (m3/hr)	63558 ( 107986 )	@Max 40°C ambient temperature
Max. restriction of cooling air: in.w.g. (kPA)	0.402 ( 0.1 )	
Engine combustion air flow: CFM (m3/hr)	4449 ( 7559 )	
Total intake air requirement: CFM (m3/hr)	68007 ( 115544.7 )	
Total coolant capacity: Litre	299	

### HEAT BALANCE

Heat at rejection to coolant: kW	921.0
Heat at rejection radiation from engine: kW	111.0
Heat at rejection to engine exhaust: kW	1248.0

### LUBRICATION SYSTEM

Oil pan capacity: Litre	150.0
Oil pan capacity with filter: Litre	180.0
Oil cooler	Water cooled, Multi plate type cooler
Recommended lubricating oil grade	Refer OEM Specification 98CAB-60505
Oil consumption at full load: Litre/hr	3.4531
Oil pressure: PSI (kPA)	82 ( 565 )

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### ENGINE ELECTRICAL SYSTEM

Starting motor voltage	24V DC
Battery capacity	2X8D, 24V, 1500A
Cranking Amps minimum	1250 A at -17.8°C

### FUEL SYSTEM

Recommended fuel	ASTM D975 No. 1-D, No. 2-D
Fuel supply line, min. ID: mm	25.0
Fuel return line min. ID: mm	25.0
Fuel supply line max. restriction: kpa	10
Fuel pump type	Engine driven gear pump
Fuel filter	Two stage fuel filter

### FUEL CONSUMPTION

	Standby Power		Prime Power
100% Load Standby: Litre/hr	345.3	100% Load Prime: Litre/hr	319.5
75% Load Standby: Litre/hr	263.5	75% Load Prime: Litre/hr	241.5
50% Load Standby: Litre/hr	185.1	50% Load Prime: Litre/hr	171.9
25% Load Standby: Litre/hr	111.7	25% Load Prime: Litre/hr	103.7

### 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, Not Included	• 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)	2189.3 (8287.5)	4378.6 (16574.9)	6567.9 (24862.4)
Tank size: L x W x H - inch	203 x 89 x 32	276 x 97 x 40	276 x 143 x 40
Tank size: L x W x H - m	5.2 x 2.3 x 0.8	7 x 2.5 x 1	7 x 3.7 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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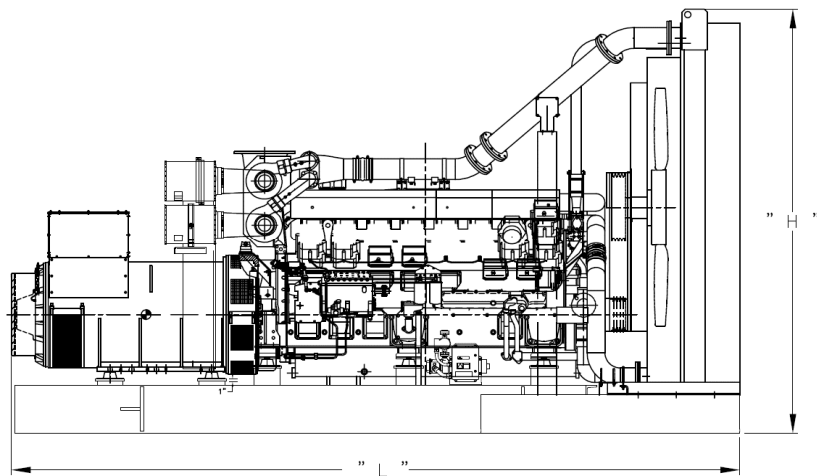
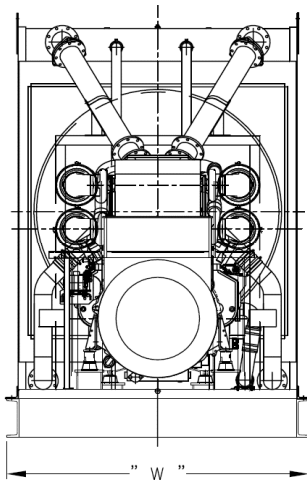
### Control Systems Standard Features - Generator Digital Control Panel

#### 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)
202 ( 5130.8 )	88.5 ( 2247.9 )	108.0 ( 2743.2 )	20186.8 ( 9155 )

\* 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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