

60Hz POWER RATINGS

Voltage AC	Phase	PF	Standby		Prime*	
			KW	A	Kw	A
120/208	3	0.8	453	1571	411	1426
120/240	3	0.8	453	1361	411	1236
277/480	3	0.8	454	682	412	619
347/600	3	0.8	454	546	412	496

* 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	Volvo
Model	TAD 1650GE
EPA certified	Tier-3
Crank shaft speed: rpm	1800
Fuel type	Diesel
Injection	Direct
Aspiration	Turbocharged
Number of cylinder	6
Cylinder arrangement	Inline
Displacement: L	16.12
Bore: mm	144
Stroke: mm	165
Engine standby power: kW	479.0
Engine prime power: kW	435.0
Cooling	Water cooled
Governor	Electronic-EMS2
Starting motor voltage	24V DC
Compression ration	16.5 :1
Air cleaner type	Air filter with replaceable paper insert

EXHAUST SYSTEM

Maximum engine exhaust temperature: °F (°C)	946.4 (508)
Exhaust gas flow: CFM (m3/hr)	3214.0 (5460.7)
Max. permissible back pressure: PSI (kPA)	1.451 (10)

COOLING SYSTEM

Radiator cooling air flow: CFM (m3/hr)	23096 (39241)	@Max 40°C ambient temperature
Max. restriction of cooling air: in.w.g. (kPA)	0.603 (0.2)	
Engine combustion air flow: CFM (m3/hr)	1271 (2160)	
Total intake air requirement: CFM (m3/hr)	24367 (41399.9)	
Total coolant capacity: Litre	61	

HEAT BALANCE

Heat at rejection to coolant: kW	220.0
Heat at rejection radiation from engine: kW	23.0
Heat at rejection to engine exhaust: kW	382.0

LUBRICATION SYSTEM

Oil pan capacity: Litre	42.0
Oil pan capacity with filter: Litre	48.0
Oil cooler	Integrated full flow
Recommended lubricating oil grade	VDS3/VDS2
Oil consumption at full load: Litre/hr	0.11
Oil pressure: PSI (kPA)	72.6 (500)

SIMMAX



**POWER
GENERATION**

DIESEL PRODUCT LINE

SVW450 T6-T3

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

ENGINE ELECTRICAL SYSTEM

Starting motor voltage	24V DC
Battery capacity	4D, 12V, 1000A
Cranking Amps minimum	280 A at +20 °C

FUEL SYSTEM

Recommended fuel	ASTM-D975-No1 and 2-DJIS KK 2204, EN 590
Fuel supply line, min. ID: mm	15.0
Fuel return line min. ID: mm	15.0
Fuel supply line max. restriction: kpa	30
Fuel pump type	Engine-driven
Fuel filter	Fuel filter 0.005mm Prefilter 0.010mm

FUEL CONSUMPTION

	Standby Power		Prime Power
100% Load Standby: Litre/hr	120.9	100% Load Prime: Litre/hr	109.1
75% Load Standby: Litre/hr	91.6	75% Load Prime: Litre/hr	83.1
50% Load Standby: Litre/hr	64.7	50% Load Prime: Litre/hr	59.6
25% Load Standby: Litre/hr	38.8	25% Load Prime: Litre/hr	36.3

ALTERNATOR SPECIFICATION

Alternator manufacturer	STAMFORD
Alternator model	HCI534
Voltage	120V - 480V, 600V
Alternator type	Four pole, Rotating field
Excitation system	Brushless, PMG (MX341)
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)	2780 (4724)

STANDARD FEATURES

• Radiator with pusher fan	• Standard fuel filter
• Medium-duty, Air filter with replaceable paper insert	• 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)	766.5 (2901.3)	1532.9 (5802.5)	2299.3 (8703.7)
Tank size: L x W x H - inch	133 x 49 x 32	191 x 49 x 40	197 x 72 x 40
Tank size: L x W x H - m	3.4 x 1.3 x 0.8	4.9 x 1.3 x 1	5 x 1.9 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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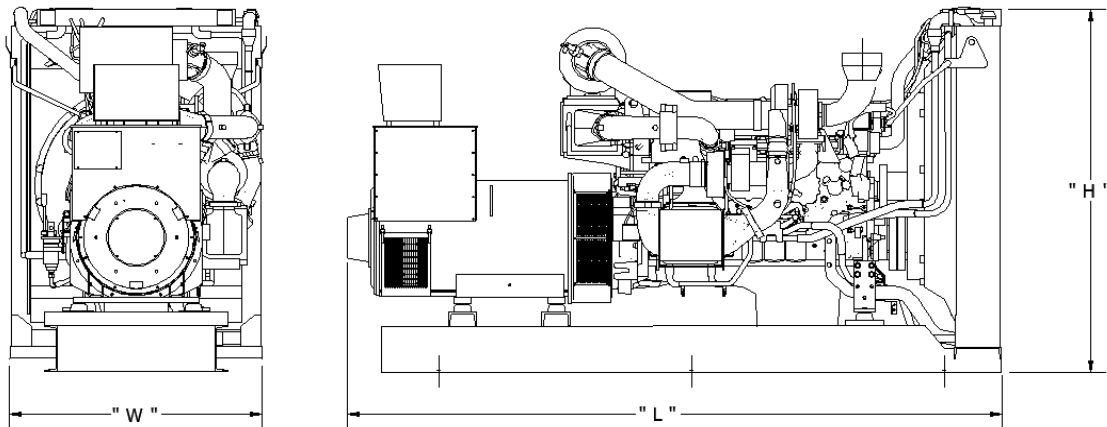
Control Systems Standard Features - Generator Digital Control Panel

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)
132 (3352.8)	48 (1219.2)	78.0 (1981.2)	8341.8 (3783.2)

* 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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