

### 60Hz POWER RATINGS

Voltage AC	Phase	PF	Standby		Prime*	
			KW	A	Kw	A
120/240	1	1	19	79	17	72
120/208	3	0.8	20	69	18	62
277/480	3	0.8	20	30	18	27

\* 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

**SKW20 T6-T4**

120/240/208/480 Volts

60 Hz/1800 RPM | Standby/Prime

### ENGINE SPECIFICATION

Manufacturer	Kubota
Model	D1803
EPA certified	Tier-4
Crank shaft speed: rpm	1800
Fuel type	Diesel
Injection	Direct
Aspiration	Natural
Number of cylinder	3
Cylinder arrangement	Inline
Displacement: L	1.826
Bore: mm	87
Stroke: mm	102.4
Engine standby power: kW	22.8
Engine prime power: kW	20.7
Cooling	Water cooled
Governor	Mechanical
Starting motor voltage	12V DC
Compression ration	20.5:1
Air cleaner type	Dry type with paper element

### EXHAUST SYSTEM

Maximum engine exhaust temperature: °F (°C)	1040	( 560 )
Exhaust gas flow: CFM (m3/hr)	160.0	( 271.9 )
Max. permissible back pressure: PSI (kPA)	1.552	( 10.7 )

### COOLING SYSTEM \*

Radiator cooling air flow: CFM (m3/hr)	2825	( 4800 )	@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)	61.8	( 105 )	
Total intake air requirement: CFM (m3/hr)	2886.8	( 4904.8 )	
Total coolant capacity: Litre	3.5		

### HEAT BALANCE

Heat at rejection to coolant: kW	21.4
Heat at rejection radiation from engine: kW	TBA
Heat at rejection to engine exhaust: kW	TBA

### LUBRICATION SYSTEM

Oil pan capacity: Litre	7.0
Oil pan capacity with filter: Litre	9.0
Oil cooler	TBA
Recommended lubricating oil grade	Class CF as per API
Oil consumption at full load: Litre/hr	0.0659
Oil pressure: PSI (kPA)	46.5 ( 320 )

\* SIMMAX recommends to limit the building air intake velocity to 650ft/minute, and the discharge air velocity to 750 ft/min.

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### ENGINE ELECTRICAL SYSTEM

Starting motor voltage	12V DC
Battery capacity	4D, 12V, 1000A
Cranking Amps minimum	166 A

### FUEL SYSTEM

Recommended fuel	Diesel Fuel No. 2-D (ASTMD975)
Fuel supply line, min. ID: mm	15.0
Fuel return line min. ID: mm	15.0
Fuel supply line max. restriction: kpa	6.67
Fuel pump type	Engine-driven
Fuel filter	17 Micron Paper Filter

### FUEL CONSUMPTION

	Standby Power		Prime Power
100% Load Standby: Litre/hr	6.6	100% Load Prime: Litre/hr	6.0
75% Load Standby: Litre/hr	-	75% Load Prime: Litre/hr	-
50% Load Standby: Litre/hr	-	50% Load Prime: Litre/hr	-
25% Load Standby: Litre/hr	-	25% Load Prime: Litre/hr	-

### ALTERNATOR SPECIFICATION

Alternator manufacturer	STAMFORD
Alternator model	PI144
Voltage	120V - 480V
Alternator type	Four pole, Rotating field
Excitation system	Brushless, Self excited (EBS option available)
Power factor	0.8
Number of leads	12 leads reconnectable (120V-480V)
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)	251 ( 427 )

### STANDARD FEATURES

• Radiator with pusher fan	• Standard fuel filter
• Medium-duty, Dry type with paper element	• 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)	41.8 (158.2)	83.6 (316.4)	125.4 (474.5)
Tank size: L x W x H - inch	59 x 24 x 10	59 x 24 x 17	59 x 24 x 25
Tank size: L x W x H - m	1.5 x 0.6 x 0.3	1.5 x 0.6 x 0.5	1.5 x 0.6 x 0.7

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

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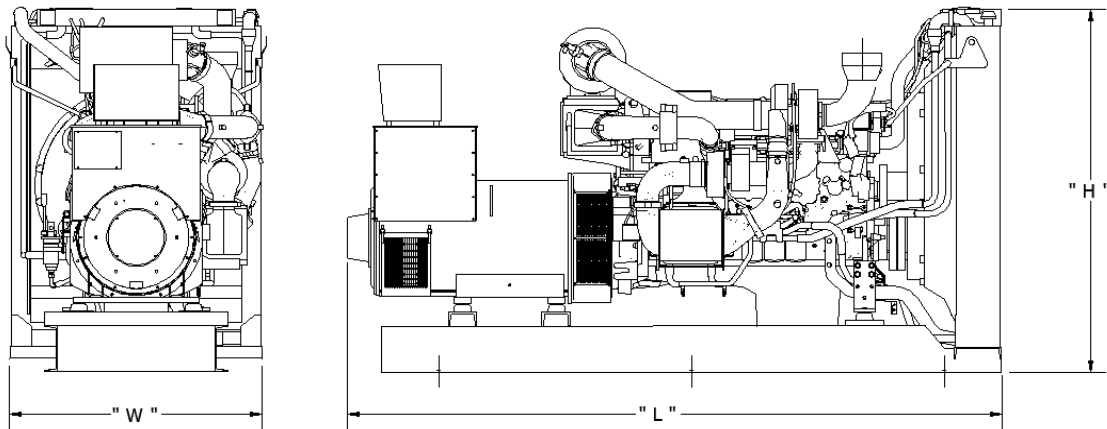
### Control Systems Standard Features - Generator Digital Control Panel

#### 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)
58 ( 1473.2 )	23 ( 584.2 )	34.0 ( 863.6 )	859.0 ( 389.6 )

\* 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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