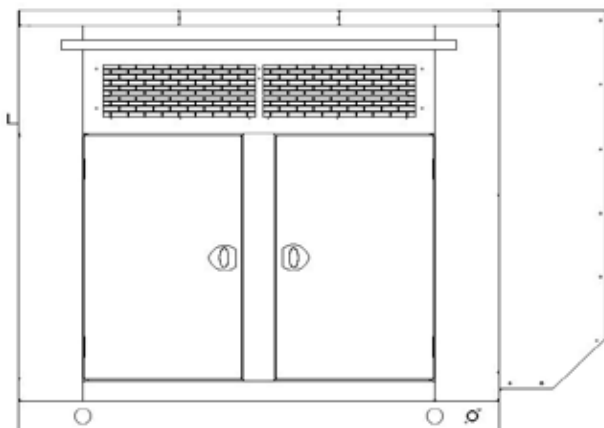




Measures:

L: 4876 mm H: 2540 mm
W: 2134 mm

Weight (dry):

15022 lbs / 6814 kg



60Hz



N/G



Water cooled



Soundproofed



1800



CSA Approved or Equivalent

1 Genset General Description

➤ Soundproof generator sets equipped with controllers to protect equipment and allow for manual of auto start up signals.

General Technical Data			
Engine	PSI 21.9L HO-NG		
Alternators	240/120V	Wdg.	-
		-	
	208/120V	Wdg.	STAMFORD HCI544D
		311	
	600/347V	Wdg.	STAMFORD HCI534C
		17	
Performance Class	H		
Frequency	60Hz		
Control Panel	240/120V		DSE 7310 MKII
	208/120V		DSE 7310 MKII
	600/347V		DSE 7310 MKII
Noise level (dBA@7m)	75 dB(A)		

Voltage (V)	PRP (KW)	ESP (KW)	PRP/ESP (A)
240/120V	-	-	-/-
208/120V	N/A	450	N/A/N/A
600/347V	N/A	450	N/A/N/A

PRP: Continuous power ("Prime Power") ISO 8528-1 standard.

ESP: Emergency power ("Emergency Standby Power") ISO8528-1 standard.

2 Engine Specifications

➤ PSI 21.9L HO-NG N/G engine, 12-cylinders, 4-stroke. Turbocharged aspiration, air intake system. Electronic regulation. Complying N/A emissions.

Engine General Data

Manufacturer/Model	PSI 21.9L HO-NG	Number of Cylinders	12 cylinders
R.P.M.	1800	Engine Capacity	21,9
Max. Power (kWm) (net)	484	Cooling System	Water cooled
Power PRP (Kwm) (net)	N/A	Regulation Type	Electronic
Fuel	N/G	Engine Type/Injection/Suction	N/G /Mixer/ Turbocharged

2.1 Fuel Feed System

➤ A fuel inlet valve mounted in frame. An approved flexible fuel line is then connected to the Mixer injection system for vibration isolation.

50% PRP 2456 ft³/hr

100% PRP 4499 ft³/hr

Fuel inlet size 3" NPT

75% PRP 3500 ft³/hr

inlet Pressure 7-11" H₂O

2.2 Cooling System

➤ Cooling provided by a pusher fan across an industrial radiator. A belt driven water pump circulates coolant throughout the engine.

1133

Fan Airflow (m3/min)

42
(31,3)

Fan Power Consumption, hp (kW)

228

Engine + Radiator Capacity (l)

4000W
208V

Blockheater (W/V)

2.3 Lubricating System

➤ Lubrication system is driven by the crankshaft driven oil pump. Full flow cartridge style filter is engine mounted. Original parts from the engine manufacture.

Total Oil Capacity 40L

2.4 Air Intake System

› Mixer air intake system including two-stage filter. Original parts from the engine manufacturer.

Combustion Air Volume 29 m³/min

2.5 Start System

› Start system by electric starter. A maintenance free battery is included. The belt driven battery charging alternator provides a charging circuit for the battery while the engine runs.

Number of Batteries

2

Battery Features

1050CCA

Starting Voltage

24V

2.6 Exhaust System

Exhaust System

Exhaust Gas Volume	90 m ³ /min
Exhaust Gas Temperature	750 °C
Exhaust External Diameter	5" (127mm)
Max. Exhaust Backpressure	10,2kPa

3 Alternator Specifications

› Alternator STAMFORD 4-poles, brushless, alternator with class - insulation wound at 2/3 pitch and self-excited automatic voltage regulator (AVR).

Alternator General Data	240/120V	208/120V	600/347V
Brand/Model	-	STAMFORD HCI544D	STAMFORD HCI534C
Winding No.	-	311	17
Voltage Regulator AVR	-	PMG + MX341	PMG + MX341
Voltage Regulator	-	±1%	±1%
ESP Power Rating 40°C (kW)	-	470,4	476
PRP Power Rating 40°C (kW)	-	460	450,4
Number of Phases	1	3	3
Power Factor (cos φ)	1	0,8	0,8
Efficiency at 100% Load	-	94,5%	94,2%
Efficiency at 110% Load	-	94,4%	94,1%

The alternator complies with the following standards:

- Class H temperature rise 105°C (257°F), continuous rating.
- Class H temperature rise 125°C (302°F), standby rating.
- AS 1359
- IEC 34-1
- BS EN 60034-1
- VDE 0530
- BS 5000
- CAN/CSA-C22.2-100
- NEMA MG1-32

Low wave distortion: THD (100% load) = 2%, THF < 2%, Complying with EN61000-6-3, EN61000-6-2 standards on radio interference.

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4 Frame Specifications

- Engine and alternator mounted on a high strength steel frame and painted with electrostatic epoxy polyester powder paint. Frame is tested in saline mist chamber to conform to ASTM B-117-09 for 500 hours. Engine and Alternator are mounted on rubber isolators to help dampen vibration while running.



5 Canopy Specifications

- Canopy made of high strength galvanized steel and is painted with electrostatic epoxy polyester paint. Canopy is lined with acoustical/fireproof rock wool. A critical exhaust muffler OdB(A) is installed to dampen exhaust noise. All is tested in a saline mist chamber to conform with ASTM B-117-09 for 720 hour.



6 Control Panel

- The control panel protects the engine and generator and allows for manual and automatic control of the genset.



6.1 Main Line Breaker

- Main line circuit breaker: A thermo-magnetic breaker provides protection against short circuits and overloads.

240/120

-

208/120

1600 Amps

600/347

600 Amps

6.2 Control Panel Features

Battery Charger

Permanently connected to the battery to keep the battery fully charged. Charger is equipped with a float feature to keep battery ready in a prime starting state.

Panel Fusing

Fusing to protect the control panel wiring and accessories.

6.3 Control Card

Control card for 600/347V: DSE 7310 MKII

Features of the DSE 7310 MKII Card:

- 132X64 pixel illuminate LCD display
- Full engine/alternator parameter and alarm read out
- 5-button menu navigation
- One touch Auto-Manual-Test and Stop buttons
- 9 factory configurable outputs
- 8 factory configurable inputs
- Programmable PLC for custom application
- Remote communication through an RS232 or RS485 connection
- Utility sensing Option

The control card complies with the following environmental tests:

- BS EN 61000-6-2 (electromagnetic compatibility)
- BS EN 61000-6-4 (electromagnetic compatibility)
- BS EN 60950 (electrical safety)
- BS EN 61000-6-2 (Temperature)
- BS EN 60068-2-6 (Vibration)
- BS EN 60068-2-30 (Humidity)
- BS EN 60068-2-27 (Shock)

6.4 Display

Control card for all Voltages: DSE 7310 MKII

Engine

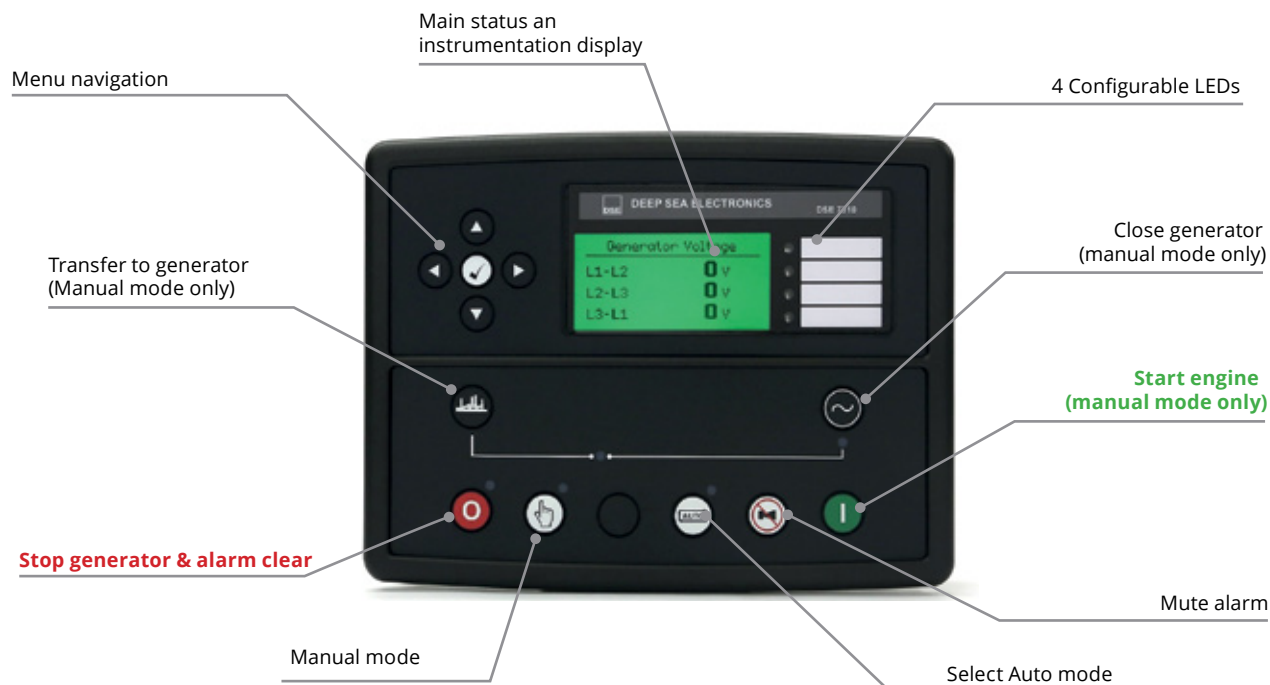
Engine Speed	Engine Hours
Oil Pressure	Number Engine Starts
Battery Voltage	Fuel Consumption
Fuel level	Engine Temperature

Generator

Voltage (L-N)	Voltage (L-L)
Frequency	Amperage
Power Factor	Load (kW, kVA, kVah)

Alarm Detected

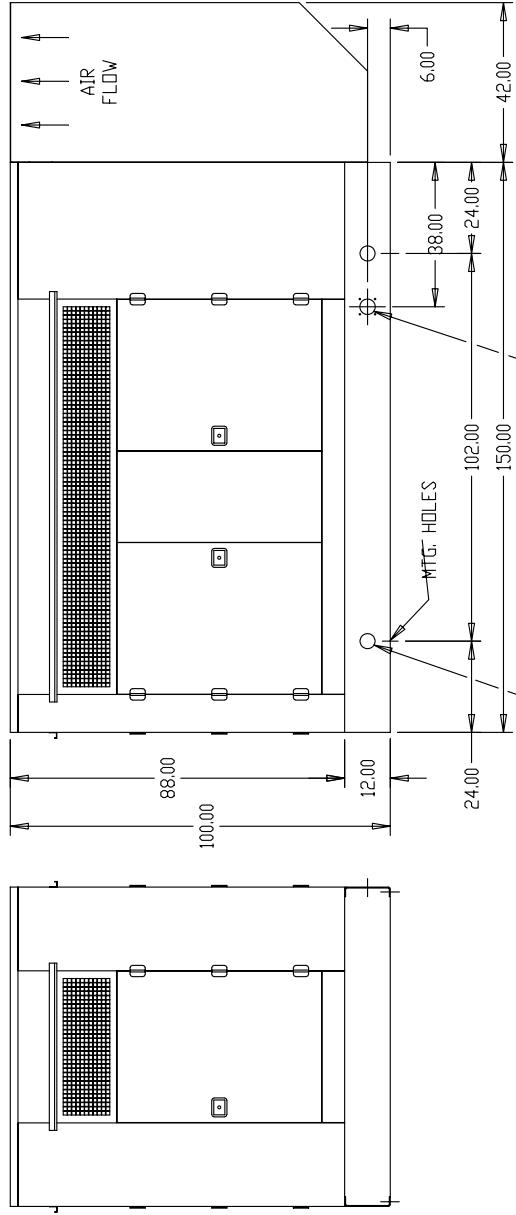
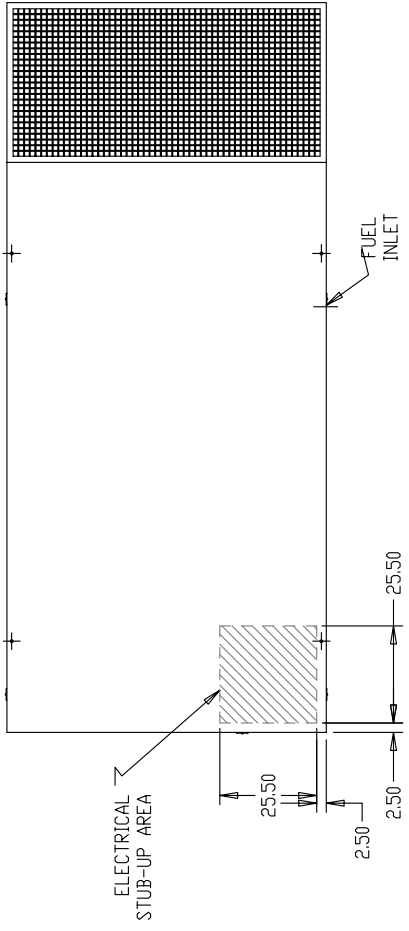
Overcrank	High Engine Temp.
Low Oil Pressure	Low Engine Temp.
Low Coolant Level	Low Fuel Level
Low Plant Battery Voltage	Main Line Breaker
Over Voltage	Over Frequency
Under Voltage	Over Speed
Control Not In Auto	Lamp Test Features



Gensets rated for operational ambient temperature of 40 C, in compliance of CSA C282-15. If ambient temperature exceeds 40 C, please contact sales representative for derating information. Emergency standby power(ESP): the maximum power available for which a genset is delivering in the event of a utility power outage or under test conditions for up to 200hours per year. Prime Power(PRP): the maximum power which a genset is capable of delivering continuously for an unlimited number of hours per year.

1	2	3	4	5	6	7	8	9	10	11	12	13
TITLE 425kV _e GENSET ENCLOSED ASSEMBLY												
VDL TAG/PHASE									ENGINE		GENERATOR	
120/208V / 3 PHASE									DOOSAN HD219LTCAC HQ STAMFORD HC1534D		DOOSAN HD219LTCAC HQ STAMFORD HC1534D	
277/480V / 3 PHASE									DOOSAN HD219LTCAC HQ STAMFORD S4LD-G		DOOSAN HD219LTCAC HQ STAMFORD S4LD-G	
347/600V / 3 PHASE									DOOSAN HD219LTCAC HQ STAMFORD HC1534C		DOOSAN HD219LTCAC HQ STAMFORD HC1534C	

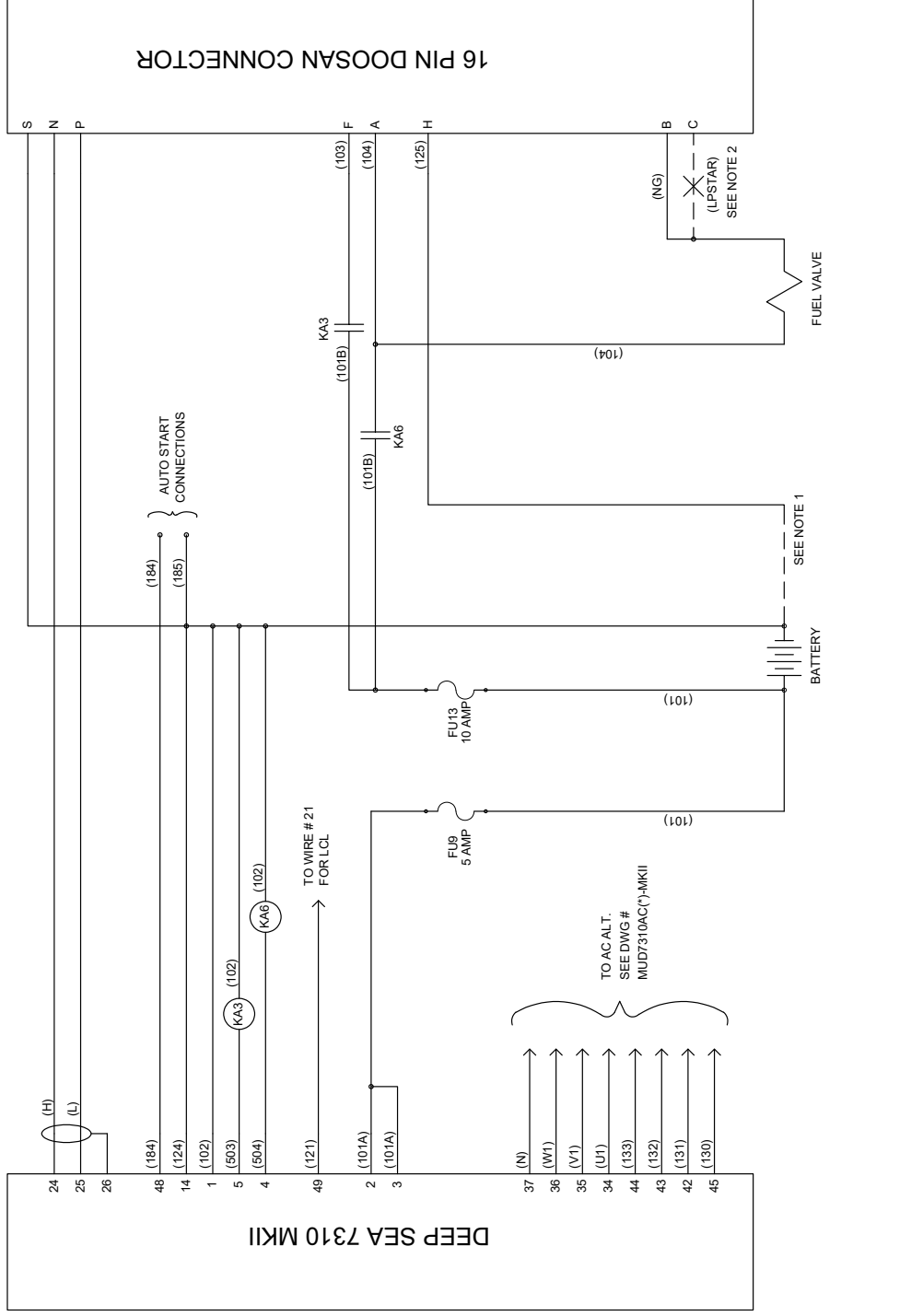
- GENERAL NOTES:
- 1) DRAWING TOLERANCES: ±.25"
 - 2) BASE MTG. HOLE TOLERANCES: ±.12"
 - 3) ALL DIMENSIONS ARE IN INCHES.
 - 4) 41" CLEARANCE REQUIRED ON BOTH SIDES AND REAR FOR DOOR SWING.



LIFTING HOLES Ø4.00 (2) PER SIDE													FUEL INLET 3.00" NP TF (FEMALE)													PROPRIETARY NOTE: This document contains information confidential and proprietary to Sommers Generator Systems and shall not be reproduced or transmitted in any form or by any means, electronic or mechanical, without the written consent of Sommers Generator Systems.													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LEGEND:

KA3 START SLAVE RELAY
KA6 EOM SLAVE RELAY
FU9 5A DC PANEL FUSE
FU13 10A DC PANEL FUSE



NOTE:

1. CONNECT WIRE TO GROUND FOR PROpane UNITS ONLY.
 2. CONNECT FUEL VALVE NEGATIVE TO PIN 'C' ON 16 PIN CONNECTOR IF SYSTEM IS RUNNING ON PROPANE.
 3. ALL WIRE #'S ARE IN PARENTHESIS. USE #16 GAUGE FOR HARNESS.
- DC
BLUE
BLACK
WHITE
ORANGE
- AC VOLTAGE SENSING
CTS & CT COMMON

AMMENDMENTS				DOOSAN NG/LP SERIES DC CONNECTION DIAGRAM			
DATE	TECHNICIAN	CHANGE	SCALE	SIZE	DATE	SHEET	
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