

Generator

450kVA St V Himoina - Datasheet

Document No: G08001145
Revision: A
Created By: V. Lyle
Approved By: J. Darroch
Approval Date: 08/12/2023
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Model

Model reference GN0450STVCAN

Model size and rating 450 kVA

Bill of Material reference number 601400 A

Manufacturer

Model Reference HRS-450 S5

Electrical Output

Electrical Output Hz (Hz) 50.0 (50) 60.0 (60)

Voltage Capability Three Ph 380-440 416-480

Performance Data

Design Rating (Continuous) kVA (kW) 450.0 (360) 453.0 (362.4)

Maximum Ambient °C (°F) 45.0 (113) 45.0 (113)

Electrical (ISO 8528-1) *

Continuous Power (COP) kW (kVA) 319.0 (398.75) 344.0 (430)

Permissible Average of PRP 70%

Electrical (ISO 3046-1) **

Alternator

Class F Temp Rise (105°C) Three Phase kW (kVA) 328.0 (410) 408.0 (510)

Class H Temp Rise (125°C) Three Phase kW (kVA) 360.0 (450) 450.0 (562.5)

Class F Temp Rise (105°C) Single Phase kW (kVA) 159.0 (198.75) 185.0 (231.25)

Class H Temp Rise (125°C) Single Phase kW (kVA) 172.0 (215) 202.0 (252.5)

Ends Out 12

Make & Type S4L1D.G4

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ISO references apply to Aggreko Manufacturing built equipment only

* ISO 8528-1 Reciprocating Internal Combustion Engine Driven Alternating Current Generating Sets:

Part 1 - Application, Ratings and Performance

** ISO 3046-1 Reciprocating Internal Combustion Engines: Performance:

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AVR	MX321
Regulation	+/-0.5%
Speed	1500/1800rpm

Circuit Breaker

Make & Type	Schneider NS800N				
Number of Poles	4P				
Rating	Amp (Amp)	800.0	(800)	800.0	(800)
Trip Unit Type	Micrologic 2.0				
Overload Protection Range	0.4-1 x In				
Short Circuit Protection Range	1.5 – 10 x Ir				
Long-time (Overload Range)	0.4-1 x In				
Short-time (Protection Range)	N/A				
Circuit Breaker Instantaneous	50KA				
Circuit Breaker Ground Fault	Relay ELR01				

Load Terminals

Type	Copper bus bar 100x10mm
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Engine

Make & Type	Scania DC13.320(02.63)				
Cylinders & Form	6L				
Aspiration	Turbocharged				
Fuel Pump	High pressure pump. Common Rail. Electronic Injection				
Governor Make & Type	EMS				
Steady State Frequency	+/-0.25%				
Battery Voltage	Volts (Volts)	24.0	(24)	24.0	(24)
Fuel Type	Diesel Oil EN590, and paraffinic fuel EN15940				
Horsepower	532.0		532.0		

ISO8528-1 Reciprocating Internal Combustion Engine

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Application	CONTINUOUS
Ratings	PRP
Performance	G3

ISO3046-1 Reciprocating Internal Combustion Engine

Declarations of Power	CONTINUOUS
Fuel Oil Consumption	192g/kWh
Lubricating Oil Consumptions	0,3g/kWh
Additional Requirements for General Use	AdBlue

Fuel Consumption

100% Prime Power	L/hr (US gal/hr)	90.2	(23.813)	95.1	(25.106)
75% Prime Power	L/hr (US gal/hr)	66.2	(17.477)	69.25	(18.282)
50% Prime Power	L/hr (US gal/hr)	45.3	(11.959)	47.1	(12.434)

Diesel Exhaust Fluid Consumption (As a percentage of Fuel Consumption)

100% Prime Power	% (%)	8.5	(8.5)	7.0	(7)
75% Prime Power	% (%)	8.5	(8.5)		

Diesel Exhaust Fluid Consumption

100% Prime Power	L/hr (US gal/hr)	7.71	(2.035)	6.67	(1.761)
75% Prime Power	L/hr (US gal/hr)	5.66	(1.494)		

Running Hours

100% Prime Power	Hours (Hours)	10.0	(10)	10.0	(10)
75% Prime Power	Hours (Hours)	13.7	(13.7)	13.7	(13.7)
50% Prime Power	Hours (Hours)	20.1	(20.1)	20.1	(20.1)

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Exhaust Emissions

Measurement Method	(EU) 2016/1628				
Specific Load	100% Prime +/-2%				
NOx - Oxides of Nitrogen	0,252 g/kWm-h				
PM - Particulate Matter	0,0013 g/kWm-h				
CO - Carbon Monoxide	0,001 g/kWm-h				
HC - Unburnt Hydrocarbons	0,007 g/kWm-h				
Exhaust Gas Velocity (PRP)	cfm (cfm)	78.0	(78)	78.0	(78)

Exhaust Silencer

Make & Type	SCANIA (ATS)				
Certificate Number	9F001143-2				
Permissible Back Pressure	0 k-Pa (ins.) Hg				
Silencer Inlet Diameter	mm (ins)	120.0	(4.724)	120.0	(4.724)
Silencer Outlet Diameter	mm (ins)	120.0	(4.724)	120.0	(4.724)

Noise Data

Sound Power - EEC	101LwA				
Certificate Number	N/A				
Sound Pressure at 1m/3ft	81dBA				
Sound Pressure at 3m/10ft	77dBA				
Sound Pressure at 7m/21ft	72dBA				

Other Capacities and Dimensions

Lube Oil Capacity - Total	L (US gal)	36.0	(9.504)	0.0	(0)
Coolant Capacity - Gross	L (US gal)	38.0	(10.032)		
External Fuel Supply - Max Above Base	m (ft)	3.5	(11.484)		
External Fuel Supply - Max Below Base	m (ft)	0.3	(0.984)		
Total ADBLUE Tank Capacity	L (US gal)	60.0	(15.84)	60.0	(15.84)

Lifting

Forklift	2x 300x96mm		2x 300x96mm		
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Overhead

4x

4x

Additional Information

The alternator can be reconnected with loss of power, but cables and breaker are not sized for a single phase connection amperage. Neither the controller has been program for single phase mode.

The engine manuf. SCANIA does not declare ESP power on the engine as they are for continuous application, 1 hour/12-hour period of overload to 110% load. Max. 25 h accumulated service time above 100% load per year but this is not compliant with ISO8528-1 ESP definition.

There is no specific fuel consumption for ESP from the engine manufacturer.

There is no specific DEF consumption for COP from the engine manufacturer.

The sensor setting on the ATS is very sensitive so we recommend not to apply any external element that could cause back pressure without factory validation.

Physical Characteristics

Length	4.78 m	15.68 ft
Width	1.7 m	5.58 ft
Height	2.39 m	7.84 ft
Gross Weight	7500 kg	16534.67 lbs
Net Weight	6677 kg	14720.26 lbs
Gross Fuel	910 lit	240.4 US gal
Net Fuel	840 lit	221.9 US gal

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