GENERATOR SET MODEL (HM-1000)

Technical Data Sheet





ALTERNATOR	ALTERNATOR DATA		
Make	Leroy Somer		
Model	TAL 049E		
No. of bearings	1		
Insulation class	Н		
Total Harmonic Content	At no load <3.5%		
	At linear load <5%		
Ingress Protection	IP23		
Excitation System	SHUNT		
Winding Pitch	2/3		
AVR Model	R150		
Overspeed	2250 mn-1		
Voltage Regulation (steady)	± 0.8%		

GENERATOR SET MODEL (HM-1000)				
	r RATINGS n, 50 Hz, <mark>150</mark> 0 rpm	PRIME 1000 KVA (800 KW)	STANDBY 1100 KV <mark>A (880 KW)</mark>	
ENGINE / TECH	NICAL DATA			
Engine Make		Perl	kins	
Engine Model		4008-3	30TAG2	
Governing Class		ISO 8528-5 2005		
Number of Cylind	ders	8		
Cylinder Arrange	ement	Vertical in line		
Bore and Stroke		160 mm x 190 mm		
Displacement / 0	Cubic Capacity	30.561 L		
Induction System	ı	Turbocharged		
Cycle		4 stroke		
Combustion Syst	em	Direct Injection		
Compression Rat	tio	13:1 L		
Rotation		Anti-clockwise, viewed on flywheel		
Cooling System		Water - cooled		
Frequency and E	ingine Speed	50 Hz & 1500 rpm		
		PRIME	STANDBY	
Gross Engine Power		901 kW (1208 hp)	997 kW (1336 hp)	
Fuel Consumptio	n @ 50% load	113.0 L/hr	-	
	@ 75% load	161.0 L/hr		
	@ 100% load	211.0 L/hr	234.0 L/hr.	

Rotation		Anti-clockwise, viewed on flywheel			
Cooling System		Water - cooled			
Frequency and Engine Speed		50 Hz & 1500 rpm			
		PRIME	STANDBY		
Gross Engine Power		901 kW (1208 hp)	997 kW (1336 hp)		
Fuel Consumption @ 50% load		113.0 L/hr	-		
	@ 75% load	161.0 L/hr	-		
	@ 100% load	211.0 L/hr	234.0 L/hr.		
Total Lubrication System Capacity		153.0 L	153.0 L		
Total Coolant Capacity (Inc. radiator)		140.0 L	140.0 L		
Boost Pressure Ratio		3.4	3.86		
Exhaust Temperature		462°C	473°C		
Radiator Cooling Air Flow (Min)		$19.6 \text{ m}^3/\text{s}$	$19.6 \text{ m}^3/\text{s}$		
Combustion Air Flow		77.0 m³/min	84.0 m³/min		
Exhaust Gas Flow		185.0 m ³ /min	203.0 m ³ /min		

GENERAL SPECIFICATIONS

1. ENGINE

Perkins four stroke heavy duty high performance industrial type diesel engine.

2. COOLING RADIATOR

Radiator and cooling fan, complete with safety guards, designed to cool the engine at high ambient temperatures. (Consult your dealer for deration factors)

3. EXHAUST SYSTEM

Heavy duty Industrial Exhaust Silence.

	Silencer noise reduction level	10 (dB)
4	Maximum allowable back pressure	8.0 (kPa)

4. CIRCUIT BREAKER TYPE

ABB 3 pole MCCB. (4 pole is optional)

5. FUEL SYSTEM

On Generating Sets up to 650 KVA, the baseframe design is incorporated with an integral fuel tank with a capacity of approx.

8 hours running at Full Load. The tank is supplied complete with fill cap breather, fuel feed and return lines to the Engine and drain plug.

6. ALTERNATOR

INSULATION SYSTEM

- The insulation system is Class H.
- All windings are impregnated in either a triple dip thermosetting liquid, oil and acid resisting polyester varnish or vacuum pressure impregnated with a special polyester resin.
- · Heavy coat of antitracking varnish additional protection against moisture or condensation.

AUTOMATIC VOLTAGE REGULATOR

The fully sealed Automatic Voltage Regulator maintains the Voltage Regulation at ±0.8%. Nominal adjustment by means of a trim pot incorpoated on the AVR.

(cont.)



GENERATOR SET MODEL (HM-1000)

Technical Data Sheet



CONTROL PANEL

Make **DEEP SEA** Model **DSE 6120**

The **DSE 6120** MKIII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single diesel or gas genset applications. It includes a backlit LCD display which clearly shows the status of the engine all the times. This module can either be programmed using the front panel or by using the DSE configuration suite PC software.

METERING AND ALARM INDICATIONS:

- Generator frequency
- Underspeed, Overspeed
- Generator volts (L-L, L-N)
- Generator current
- · Engine oil pressure
- Fuel level (Warning or shutdown) Optional
- Failed to reach loading voltage/frequency
- CAN diagnostics and CAN fail/error

- · Engine oil pressure
- Engine coolant temperature
- Battery volts
- Fail to start/stop
- Emergency stop
- Charge fail
- Low DC voltage
- · Hours run counter

DIMENSIONS AND WEIGHT				
	Length	Width	Height	Weight
Open Type	490 <mark>0 m</mark> m	2190 mm	2070 mm	6415 kg
Closed Type	121 <mark>90 mm</mark>	24 <mark>40</mark> mm	2900 mm	17015 kg

RATINGS DEFINITION

Prime Power

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power.

10% overload power is available for 1 hour in 12 hours continuous operation.

Standby Power

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings.

STANDARD REFERENCE CONDITIONS

Output ratings are presented at 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%. This generating set is designed to operate at high ambient temperatures (up to 55°C), humidity (up to 99%) and higher altitudes. Deration may apply, please consult your dealer for specific site ratings.

AVAILABLE OPTIONS & ACCESSORIES

We offer a range of optional features and accessories to tailor our generatin sets to meet your power needs.

OPTIONS

- A variety of generating set control and synchronizing panels
- Additional protection alarms and shutdowns
- Water fuel separator
- Water jacket heater
- Battery charger

ACCESSORIES

- Genuine spare parts
- Load banks
- Auxiliary fuel tanks
- Manual & automatic transfer switches

GENERAL SPECIFICATIONS

MOTOR STARTING

An overload capacity equivalent to 300% of the Full Load impedance at zero Power Factor can be sustained for 10 seconds, when PMG option is fitted.

7. MOUNTING ARRANGEMENT

BASE FRAME

The complete Generating Set is mounted as a whole on a heavy duty fabricated steel Base frame.

· COUPLING

The Engine and Alternator are directly coupled by means of an SAE flange.

The Engine flywheel is flexibly coupled to the Alternator rotor.

ANTI-VIBRATION MOUNTING PADS

Anti-Vibration pads are affixed between the Engine/Alternator feet and the Base frame thus ensuring complete vibration isolation of the rotating assembly.

· SAFETY GUARDS

The Fan & Fan Drive along with the Battery Charging Alternator are Safety Guard protected for personnel protection.

8 FACTORY TESTS

- The Generating set is load tested before dispatch
- All protective devices control functions and site load conditions are simulated.
 The generator and it's systems are checked before dispatch.

9. EQUIPMENT FINISHING

All mild steel components are fully degreased and painted with powder coated paint to ensure maximum scuff resistance and durability.

10. DOCUMENTATIONS

The base frame design can be incorporated with an integral fuel tank with a capacity of approx. 8 hours running at Full Load. The tank is supplied complete with fill cap breather, fuel feed and return lines to the Engine and drain plug.

11. QUALITY STANDARDS

The equipment meets the following standards: BS4999, BS5000, BS5514 IEC 60034, VDE0530, NEMA MG 1.22 and ISO 8528.

12. WARRANTY

All of the Generating Sets provided by Hulool Motors are covered under a warranty policy for a period of 12 months.