

# Technical Specification



## Model: SEMP45S

Powered by PERKINS



### Applicable Standards

- ISO 8528-5:2018
- GB/T2820.5-2009
- CE

General Information		Prime power	Standby power
Rated Power (kVA)		45	50
Power Rating (kW)		36	40
Frequency (Hz)		50	
Engine Model		1103A-33TG1	
Engine Speed (RPM)		1500	
Phase		3	
PF		0.8	
Control System		Digital	
Rated voltage (V)		380/220 (According to customer requirements)	
Fuel tank capacity operating time		≥ 8h @ 75% load	
Fuel Consumption (L/h)	110% load	11.7	
	100% load	10.8	
	75% load	8.2	
	50% load	5.8	

### Environmental Conditions

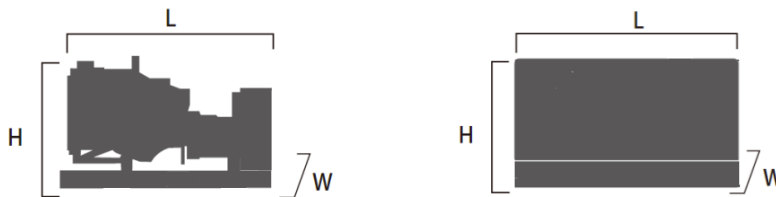
- Ambient temperature: +5°C~+40°C
- Altitude: ≤1000m
- Remark: If your conditions are different from the above, please contact our sales.

### Factory Inspection

- Complete design and quality inspection
- 0%, 25%, 50%, 75%, 100%, 110% load test.
- Function test.
- Protection test

### Painting Process

- SEM has the most advanced automatic spraying / powder coating production line, and is equipped with various sandblasting equipment to ensure higher quality.
- Canopy painting: Henkel pretreatment process and world famous brand AkzoNobel powder.
- Base Frame painting: Sandblasting process and AkzoNobel powder



### Dimension and Weight

Model	SEMP45 Open type	SEMP45S Silent type
Length (L) mm	1950	2300
Width (W) mm	700	1000
Height (H) mm	1350	1300
Dry weight (kg)	1140	1310
Tank capacity (L)	140	180
The loading capacity (40'HC)	18 units	20 units

Note: Specifications and illustrations are subject to revision without notice.



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## Engine Specifications

Engine model & manufacturer		1103A-33TG1 (Perkins)
Emission Certification		-----
Number of cylinders		3
Cylinder arrangement		In-line
Cycle		Four stroke
Aspiration		Naturally aspirated
Bore x Stroke		105x 127 mm
Displacement		3.3 L
Compression ration		17.25: 1
Prime power /speed		42.2kW/1500 rpm
Standby power /speed		46.5kW/1500 rpm
Speed governor		Mechanical
Cooling system		Forced Water Cooling Cycle
Frequency droop		≤5%
Total lubrication system capacity		7.9 L
Coolant capacity		4.4 L
Fuel consumption	100% load	230 g/kWh @ 1500 rpm
Starter motor		DC 12V
Charge alternator		DC 12V

- ◆ Heavy duty diesel engine
- ◆ Anti-vibration mount
- ◆ Replaceable fuel filter, oil filter & air filter
- ◆ Cooling radiator and fan
- ◆ Starter battery (with lead acid) including rack and cables
- ◆ Flexible fuel connection hoses
- ◆ Exhaust silencer and bellows
- ◆ Operation manuals and circuit diagram documents

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## Alternator Specifications



Alternator Model		EAGLE 224D	
Rated Output	50kva		
Efficiency (%)	85.7 %		
Rated speed	1500 RPM		
Rated Voltage	400V		
Exciter type	Self Excitation, Brushless		
Number of phase	3		
Power factor (Cos Phi)	0.8		
Poles	4		
Insulation type	H class		
Winding Pitch	2/3		
IP rating	IP23		
Bearing	Single bearing		
Voltage regulator	A.V.R SX460		
Coupling	Flexible disc		
Altitude	<=1000m		
<b>Optional</b>			
Optional alternator band	Stamford	Leroy Somer	
Optional alternator model	S1L2-R1	TAL-A42-F	
Rated output power	45kva	45kva	

## Control Panel

### DSE7320MKII

#### AUTO START & AUTO MAINS FAILURE CONTROL MODULES



#### Key features

- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- DSENet expansion compatibility
- Data logging facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232 & RS485 communication
- Front panel configuration with PIN protection

#### Key benefits

- 3 phase mains (utility) sensing and protection (DSE7320 MKII only)
- Automatic load transfer control (DSE7320 MKII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7320 MKII only)
- kW and kvar overload and reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection
- Breaker control via fascia buttons
- Automatically transfers between mains (utility) and generator (DSE7320 MKII only) for convenience.
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements

## Options

Engine	Alternator	Fuel System	Generating Set
<input type="checkbox"/> Water Jacket Preheater <input type="checkbox"/> Oil Preheater <input type="checkbox"/> Oil manual pump	<input type="checkbox"/> PMG excitation <input type="checkbox"/> Space heater <input type="checkbox"/> Winding temperature measuring	<input type="checkbox"/> 12 / 24 hour base tank <input type="checkbox"/> Bunded fuel tank <input type="checkbox"/> External fuel tank <input type="checkbox"/> Automatic fuel feeding <input type="checkbox"/> Switch between external tank and base tank (three-way valve)	<input type="checkbox"/> Deepsea, ComAp, Smartgen etc. controller <input type="checkbox"/> Trailer <input type="checkbox"/> Tools with the machine

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