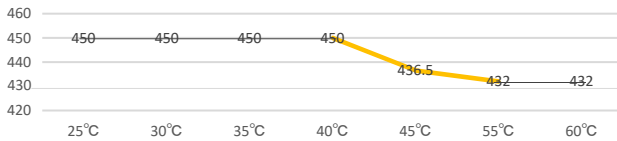


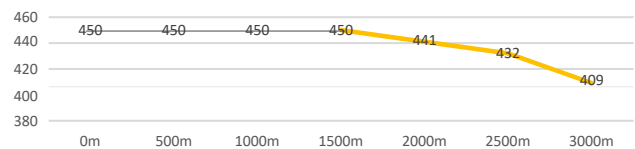


| MODEL           |             |     | PEMP450S3 |
|-----------------|-------------|-----|-----------|
| Power<br>Pf.0.8 | Standby     | kVA | 450       |
|                 |             | kW  | 360       |
|                 | Prime       | kVA | 400       |
|                 |             | kW  | 320       |
|                 | Frequency   | Hz  | 50        |
|                 | Voltage     | V   | 230/400   |
|                 | Rated speed | rpm | 1500      |

Temperature (CePEMius) Derate  
Curves Unit: kVA



Altitude (meters) Derate Curves  
Unit: kVA



#### Standard reference Conditions:

Standard reference condition 25°C (77°F) air inlet temp, 100m (328ft) A.S.L 30% relative humidity. Fuel consumption data with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998, Class A2.

#### PEM generator sets meet the standards of

ISO9001, CE, BS5000, ISO 8528, ISO 3046, IEC 60034, NEMA MG-1.22.



#### Standard Features

- PEM Power provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The generator set complies with ISO 8528-5, Class G3 requirements for transient performance.
- The generator set accepts rated load in one step.
- The 50Hz generator set engine is certified by the Environmental Protection Agency (EU or MEP) to conform to EU2, EU3 nonroad emissions regulations.(≤560KW)
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are aPEMo available.

#### Generator Features

- The brushless, rotating-field generator has broadrange reconnectability.
- The pilot-excited, permanent-magnet generator (PMG) provides superior short-circuit capability
- Controllers are available for all applications. See controller features inside.
- The low coolant level shutdown prevents overheating (standard on radiator modePEM only).
- Integral vibration isolation eliminates the need for under-unit vibration spring isolators.
- An electronic, isochronous governor delivers precise frequency regulation.
- Electronic engine controPEM and a generator microprocessor controller combine to deliver one of the most advanced control systems in today's generator market.

## Engine Specifications

|                             |                                             |
|-----------------------------|---------------------------------------------|
| Manufacturer / Model        | PERKINS 2206C-E13TAG3                       |
| Cylinder No.& Configuration | 6 cylinder Diesel L type                    |
| Working Mode                | Turbocharged and air-cooled charge air      |
| Bore x Stroke               | 130*157mm                                   |
| Displacement                | 12.5L                                       |
| Compression Ratio           | 16.3:1                                      |
| Rated Power                 | 373.4kW                                     |
| Rated Speed                 | 1500                                        |
| Lubrication System          | Splash Lubrication                          |
| Lube Oil                    | Conforms above CF class or SAE10W-30,15w-40 |
| Lube Oil Capacity           | 40L                                         |
| Battery Capacity            | 6-QW-100(680)*2                             |
| Fuel Type                   | Diesel:0#(Summer),-10#(Winter),-35#(Cold)   |
| Fuel Consumption 25% load   | 23L/H                                       |
| Fuel Consumption 50% load   | 46L/H                                       |
| Fuel Consumption 75% load   | 65L/H                                       |
| Fuel Consumption 100% load  | 85L/H                                       |

## ALTERNATOR SPECIFICATION

|                                                                                    |                                            |
|------------------------------------------------------------------------------------|--------------------------------------------|
| Type                                                                               | 4-Pole, Rotating-Field                     |
| Exciter type                                                                       | Brushless, Permanent-Magnet, Pilot Exciter |
| Voltage regulator                                                                  | Solid-State, Volts/Hz                      |
| Insulation                                                                         | NEMA MG1, Class H                          |
| Material                                                                           | Synthetic, Nonhygroscopic                  |
| Temperature rise                                                                   | Prime 130°C, 150°C Standby                 |
| Bearing: quantity, type                                                            | 1, Sealed                                  |
| Coupling                                                                           | Flexible Disc                              |
| Amortisseur windings                                                               | Full                                       |
| Rotor balancing                                                                    | 125% 60 Hz, 150% 50 Hz                     |
| Voltage regulation, no-load to full-load(with < 0.5% drift due to temp. variation) | 3-Phase Sensing, $\pm 0.25\%$              |
| One-step load acceptance                                                           | 100% of Rating                             |
| Unbalanced load capability                                                         | 100% of Rated Standby                      |

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Digital solid-state.volts-per-hertz voltage regulator with  $\pm 0.25\%$  no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.

## Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Programmable microprocessor logic and digital display features. Safeguard circuit protection standard.

12- or 24-volt engine electrical system capability.

Remote start, remote annunciation, and remote communication options. Refer to M6-46 for additional controller features and accessories



## Key Features

- 4-line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- LED and LCD alarm indication
- Customisable status screens
- Power save mode
- Support for up to three remote display units
- 9 configurable inputs
- 8 configurable outputs
- Flexible sender inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time scheduler
- Configurable event log (250)
- Control logic facilities
- Easy access diagnostic page
- CAN and Magnetic Pick-up / Alt. Sensing
- Fuel usage monitor and low fuel alarms
- Charger alternator failure alarm
- Manual speed control
- Manual fuel pump control
- Engine exerciser
- "protections disabled" feature
- kW overload protection
- Power monitoring
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer
- Unbalanced load protection
- Independent Earth Fault trip
- USB connectivity
- Backed up real time clock
- Configurable display languages
- User selectable RS232 and RS485 communications
- SMS Messaging (additional external modem required)
- Additional display screens to help with modem diagnostics
- Integral PLC editor

## Generating Sets Standard and Optional Features

- |               |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engine</b> | <ul style="list-style-type: none"> <li>• 4-stroke, water-cooled diesel engine</li> <li>• Standard air filter</li> <li>• Standard fuel filter</li> <li>• Standard oil filter</li> <li>• Oil temperature sensor</li> <li>• Low coolant level sensor</li> <li>• Radiator with blowing fan</li> <li>• Industrial Grade Silencer</li> <li>• Fuel water separator</li> <li>• Water jacket heater (optional)</li> </ul> |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Alternator</b> | <ul style="list-style-type: none"> <li>• Class H insulation</li> <li>• IP23 Protection</li> <li>• Automatic Voltage Regulator (AVR)</li> <li>• PMG excitation (optional)</li> <li>• Single bearing alternator</li> <li>• Class F or class B temperature rise (optional)</li> <li>• Digital Voltage Regulator (optional)</li> <li>• Double bearing (optional)</li> <li>• Anti-Condensation Heater (optional)</li> <li>• IP41 Protection (optional)</li> </ul> |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

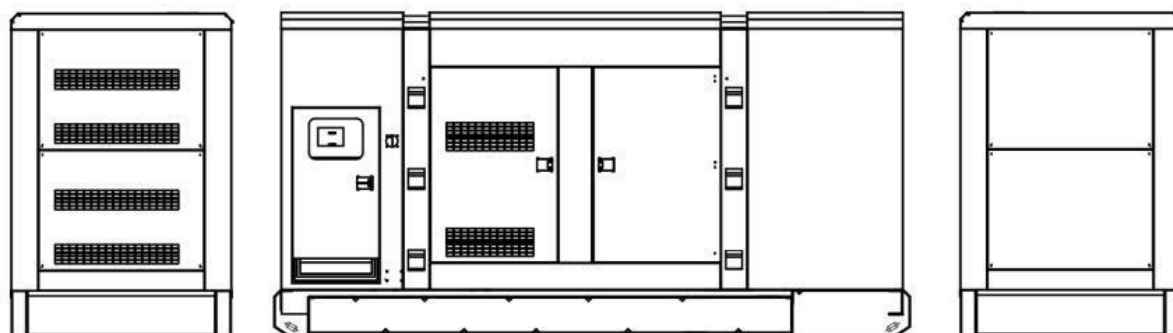
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|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical system</b> | <ul style="list-style-type: none"> <li>• Maintenance-free and anti-explosion battery</li> <li>• Standard breaker</li> <li>• ABB breaker (optional)</li> <li>• ATS (optional)</li> <li>• Battery charger (optional)</li> <li>• GMS monitoring (optional)</li> </ul> |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                |                                                                                                                                                                        |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Packing</b> | <ul style="list-style-type: none"> <li>• Engine manual</li> <li>• Alternator manual</li> <li>• Gensets operation and maintenance manual</li> <li>• Tool kit</li> </ul> |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

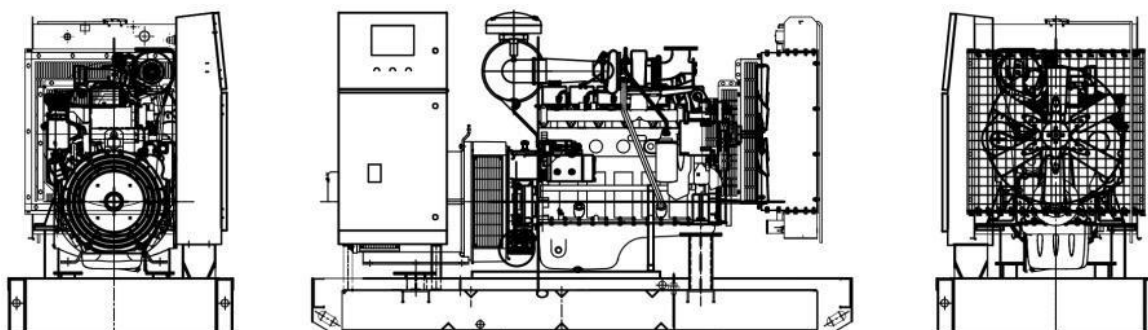
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|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Baseframe</b> | <ul style="list-style-type: none"> <li>• Forklift pockets</li> <li>• Pulling slots</li> <li>• Earth wire protection</li> <li>• Built-in anti vibration mountings</li> <li>• Fuel outlet value</li> <li>• Standard fuel tank</li> <li>• Enlarged fuel tank (optional)</li> <li>• Separated fuel tank (optional)</li> </ul> |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |               |                                                                                                                                                                                                                       |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Canopy</b> | <ul style="list-style-type: none"> <li>• Weatherproof &amp; sound-attenuated canopy</li> <li>• Sound-absorbing material</li> <li>• Lifting lug</li> <li>• Emergency stop button</li> <li>• Inside silencer</li> </ul> |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Overview Dimension & Weight



| P450S3 (Silent type) |                |               |                |             |                       |
|----------------------|----------------|---------------|----------------|-------------|-----------------------|
| Configuration        | L= Length (mm) | W= Width (mm) | H= Height (mm) | Weight (kg) | Fuel Tank Capacity(L) |
| Silent Type          | 4260           | 1462          | 2100           | 4180        | 800                   |



| P450E3 (Open type) |                |               |                |             |                        |
|--------------------|----------------|---------------|----------------|-------------|------------------------|
| Configuration      | L= Length (mm) | W= Width (mm) | H= Height (mm) | Weight (kg) | Fuel Tank Capacity (L) |
| Open Type          | 3490           | 1330          | 2050           | 3160        | 540                    |

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