



# Generator Set Range SG-3000 & SG-4000 Series

Solutions for marine containers

- Market leading compliance
- Low fuel consumption
- Highest residual value
- World leading reliability and support



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Maintaining  
the cold chain

# Introduction

## Mission critical: maintaining the cold chain

Temperature sensitive cargo is protected on long sea voyages by electrically powered refrigeration units. When reefer containers move from the point of landfall to their final destination, they need a totally dependable but independent source of electrical power.

Thermo King has set the world standard in marine container refrigeration for many years and its Generator Set Range provides this vital power supply from ship to shop, by rail or by road, moving or in storage. Clean but powerful diesel engines provide a totally reliable and extremely economical source of energy.

Two ranges have been developed to cater for a wide variety of needs and budgets while meeting the toughest environmental regulations.

The SG-4000 range is the most advanced Generator Set in the market. Total cost of ownership has never been better managed; downtime is minimised, maintenance is predictable and residual value is assured. A fully modular design means a solution for all applications and intelligent controls ensure error-free operation. Global operations get global compliance with Thermo King's Compliance Plus.

The SG-3000 range is the proven world standard for reliability, evidenced by thousands of units in use worldwide. It offers a reliable source of electric power with low emission, no matter how high the ambient temperature or how sensitive the load.



SGSM-3000



SGCO-3000



SGCN-3000



SG-4000 engine



SG-4000 clip-on



SG-4000 undermount

# SG-4000 Market-leading compliance

Worry-free operation

As a shipper or a leasing company, you want to focus on your business, not on emissions regulations. Thermo King's Compliance Plus program exists to make sure this happens.

The SG-4000 is fully Tier IV compliant without any modifications and its compliancy exceeds the toughest global regulations: the Environmental Protection Agency (EPA-Federal) in North America, the California Air Resource Board (CARB-State), Environment Canada and the European Environmental Agency (EEA) in Europe.

To operate in California, total compliance with CARB is a must. The SG-4000 is simply the most cost effective solution on the market to make this possible.

The bottom line? Worry-free, future-proofed operation. And rock-solid residual values.

Thermo King's flagship range was conceived to achieve four key objectives:

- Market-leading compliance without compromising operating cost or performance
- Intelligent operation to ensure total product protection, time after time
- Total modularity to suit every configuration and every application
- Lowest total cost of ownership (TCO)

# SG-4000 Intelligent operation

Advanced controller for optimised operation

Thermo King's SG+ is the industry's most advanced microprocessor controller. More importantly, it is also the most user-friendly ensuring error-free operation. The four-line display allows full-message text in multiple languages for clear and immediate understanding.

## Features

- Status and settings display to monitor unit operation
- Easily understood alarms, without the need for acronyms and code tables
- Variable engine speeds for reduced fuel consumption and emissions
- Fuel monitoring to keep track of fuel consumption and detect abnormal situations
- Auto restart to provide maximum load protection
- Auto engine preheat with delayed voltage output to extend the life of the unit
- Full telematics compatibility to interface with advanced wireless remote monitoring systems for global positioning, geo-fencing and web-based fleet management services
- Multi-language capability as standard over the entire menu navigation process



# SG-4000 Total modularity

A perfect solution for every application

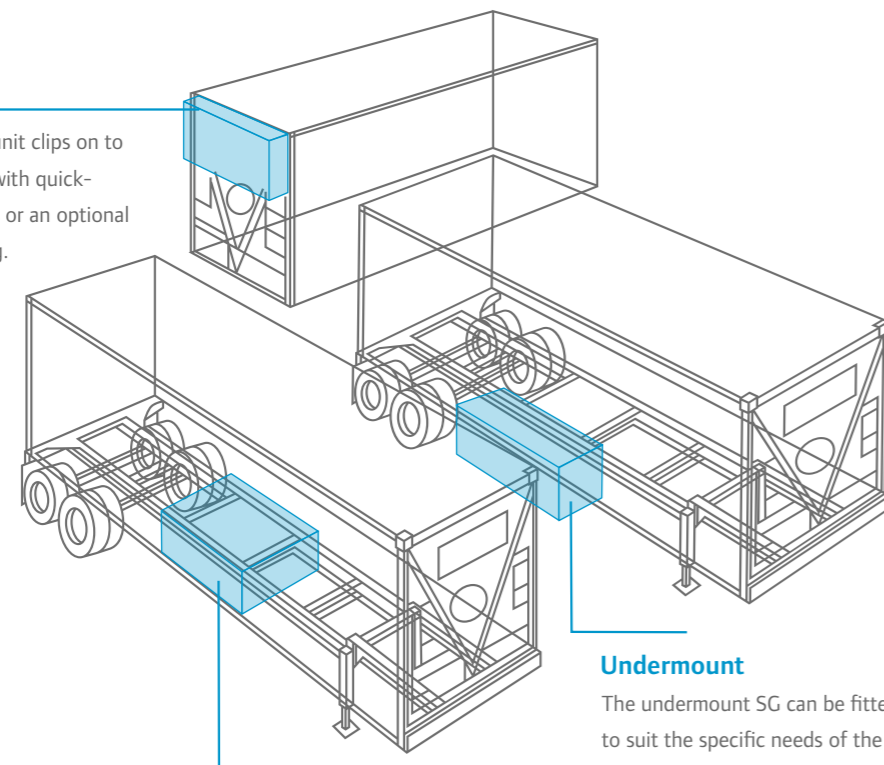
The modular design of Thermo King's SG-4000 range means that for every configuration, there is an ideal solution.

## Clip-on

Streamlined dimensions and serviceability are key features of the aerodynamic SG nose-mount range. The self-contained unit clips on to the corner castings with quick-disconnect fasteners or an optional header pin mounting. The result is a power plant that is ideal for railcar applications or double stacking and can go anywhere the container goes. The clip-on configuration includes a built-in 125 gallon "true draw" fuel tank.

## Undermount

The undermount SG can be fitted in two ways, to suit the specific needs of the operator. Installation can be under the centre of the chassis, between the I-beams or on the side of the container. Either configuration provides maximum road clearance and balanced weight distribution.



### Clip-on

The self-contained unit clips on to the corner castings with quick-disconnect fasteners or an optional header pin mounting.

### Undermount

The undermount SG can be fitted in two ways, to suit the specific needs of the operator.

# SG-4000 Lowest total cost of ownership

Compliance at ease

The SG-4000 range was conceived with a no-compromise approach to achieve the lowest possible cost of operation and maintenance allied to industry leading resale values.

At the heart of the SG-4000 platform lies a highly innovative and dependable diesel engine producing 29.2 HP. The engine utilises a high-pressure common rail injection system to elevate fuel pressure and thus minimise particulate matter residues and emissions within the cylinder itself. The engine runs cleaner and critically avoids the cost and complexity of high-maintenance after-treatment systems such as a diesel particulate filter (DPF), used in competitor models. This means the SG-4000 is fully compliant with CARB and EPA Tier 4 emissions regulations straight out of the box. The engine is coupled to a state-of-the-art generator and managed by the advanced SG+ microprocessor controller.

Your investment is protected: future-proofed regulatory compliance means future-proofed residual values.

## Full compliance from day one



# SG-3000 Proven reliability

Consistently reliable operation in unforgiving marine environments

The SG-3000 range continues to deliver Thermo King quality and dependability at a cost to meet the most stringent of budgets. It is available in three models for clip-on, center-mount or side-mount applications.

## The key to unmatched reliability and absolute continuity of the cold chain:

- A tried and tested diesel engine employs low pressure mechanical fuel injection to generate 15 kW and deliver utterly dependable power supply no matter how tough the conditions
- Advanced control systems allow constant monitoring and early fault detection  
The SG+ microprocessor controller provides:
  - Pre-trip checks and advanced diagnostics to eliminate unscheduled maintenance
  - Fuel monitoring where abnormal conditions will be flagged
  - Auto-restart feature protecting cargo
- Parts and units are tested in extreme conditions to ensure they will survive the toughest conditions

Fuel is a significant and increasing contributor to operating cost. The SG range uses an enhanced operation mode (EcoPower™) to deliver more than 20 % fuel savings, when compared with competitor products.

The workhorse SG-3000 has been the dependable, low-cost solution for many years. Shippers worldwide know it as the unit which will ensure an unbroken cold chain, no matter how demanding the conditions.

For use outside North America and Canada only.

# Service and parts support

## Worldwide support protects both the equipment and the valuable cargo

Genuine Thermo King replacement parts, which have been engineered to provide optimal performance and maximum life, will protect both the equipment to which they are fitted and the valuable cargo protected by that equipment. Total peace of mind is guaranteed, both for the shipper and for the client.

Comparative testing consistently proves that these high quality components are superior in performance and durability when compared with competitor offerings.

Whatever the routing, 24/7 support is never far away. As with all Thermo King products, the SG Marine Genset range is fully supported by the world's most extensive service network. Over 400 factory-trained, tested and certified Thermo King Dealers provide worldwide round the clock service, guaranteeing that the equipment is maintained, the cold chain unbroken and the load kept in prime condition. It's just what you would expect from the world leader.

## Worldwide round the clock service

## Protect your investment

## Protect your cargo



# The range



# Specifications

GENERATOR SET	SG-3000	SG-4000
Engine	TK diesel engine	TK diesel engine compliant with EPA Tier 4 and CARB regulations
Fuel type	No.2 diesel (under normal conditions) No.1 diesel (cold weather fuel)	No.2 diesel (under normal conditions) No.1 diesel (cold weather fuel)
Rotational speed	1890+/-10 RPM 1560 + 10-0 RPM	1500 ± 25 rpm 1800 ± 25 rpm
Generator	460/230 Vac, 3 Phase, 60Hz	460/230 Vac, 3 Phase, 60 Hz
Output power	15 kW	15 kW
Apparent power	18.75 kVA	18.75 kVA
Rotational speed	1800 RPM	1800 RPM
Electrical system	SG+ microprocessor controller	SG+ microprocessor controller
Battery	12V, 925 CCA at -18°C (0°F)	12V, 925 CCA at -18°C (0°F)
Fuel tank	Included in all models	Included in all models
SGCO	473 l (125 gal)	473 l (125 gal)
SGCM	302 l or 198 l (80 gal or 50 gal)	302 l or 198 l (80 gal or 50 gal)
SGSM	283 l (75 gal) round steel tank	302 l or 198 l (80 gal or 50 gal)

WEIGHT		
SGSM	678 kg (1495 lbs)	678 kg (1495 lbs)
SGCO	818 kg (1804 lbs)	818 kg (1804 lbs)
SGCM	671 kg (1480 lbs)	678 kg (1495 lbs)

Specifications are subject to change.





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For further information please contact:

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