INSIDE MARINE.
TRANSPORT REFRIGERATION SOLUTIONS
Since the introduction of its first commercial container refrigeration unit in 1956, Thermo King has been providing technological leadership through product innovation, sustainability, performance and energy saving solutions. Successfully introducing scroll compressor technology, MAGNUM PLUS® leads the class: it has proven to be one of the lightest, simplest, most powerful, most efficient, and lowest energy-consuming reefers in the industry.

Consumers around the globe demand fruits and vegetables of the best quality, taste and appearance year round. Thermo King has taken existing technology to a new level with MAGNUM PLUS® Optima, the active controlled atmosphere solution that expands market accessibility for your cargo.

The most advanced genset range ever created by Thermo King, the SG-4000 raises the bar for reliability and performance while exceeding the toughest environmental regulations in place today. Innovative architecture and environmentally sound, advanced solutions enable the SG-4000 genset to perform in even the harshest conditions.

Shipping fresh foods around the world to arrive in excellent condition requires constant monitoring of the cold chain to protect cargo integrity. New smart marine telematics from Thermo King give you the control you need for any genset on the market, featuring tailored, user-friendly reports to make the job easier.

**INNOVATING IN THE MARINE REFRIGERATION INDUSTRY**

- FIRST to introduce scroll compressor technology
- FIRST to introduce a cost-effective and energy saving modified atmosphere system
- FIRST to develop and commercialize microprocessor-controlled gensets
- FIRST to develop a variable-speed, adaptive system to drastically reduce genset fuel consumption
- FIRST to exceed regulation requirements for genset emissions

**RELENTLESS COMMITMENT. PRECISE CONTROL.**
As the founder of transport refrigeration, Thermo King has always been committed to engineering innovative products and technologies and providing new levels of efficiency and performance for customers across the globe.

The MAGNUM PLUS® is the result of years of field experience acquired with its predecessor, the MAGNUM™, a game-changer in precise temperature control. The MAGNUM PLUS® was the first reefer to feature flame-sprayed aluminum coating on the compressor casing, taking corrosion protection to a new level in unforgiving sea transport. It also proved the efficiency of digital scroll compressor technology – fewer moving parts, increased reliability, faster pull-down, and the ability to reach never-before-seen low transport temperatures (-35 degrees Celsius) when utilized with the global transport industry standard R-404A refrigerant.

**LOWEST TEMPERATURE**
The MAGNUM PLUS® is the only unit on the market capable of reaching and maintaining a box temperature of -40°C in +50°C ambient environment, thereby preserving product quality and further increasing usable box life.

**FAST PULL-DOWN**
Thanks to its superior cooling capacity, the MAGNUM PLUS® can increase storage life by reaching the set-point faster and more accurately.

**LOW ENERGY CONSUMPTION**
Less energy is required with MAGNUM PLUS® with its MP4000 controller, allowing significant cost savings and setting a new standard in efficiency.

**MINIMISING ENVIRONMENTAL IMPACT**
The future is greener with MAGNUM PLUS®, thanks to its efficient operation. MAGNUM PLUS® decreases the impact on the environment without compromising temperature control.

**PROVEN TECHNOLOGY**
With over 100,000 units in service and years of experience, the MAGNUM PLUS® platform has been recognised by the industry as extremely reliable.

**GLOBAL SERVICE**
Thermo King’s global network provides support you can count on. Everywhere.
ACTIVE CONTROL. PERFECT FRUIT.

MAGNUM PLUS® OPTIMA

Consumers around the globe demand fruits and vegetables of the best quality, taste and appearance year-round. Thermo King has taken existing technology to a new level with MAGNUM PLUS® Optima, the active controlled atmosphere solution that sends your cargo by ship to consumers all over the world.

Fresh fruit, vegetables and flowers are living organisms that "breathe" oxygen (O₂) and produce carbon dioxide (CO₂) and water (H₂O), a process that continues after harvest and which increases shrinkage, causes loss of quality, and a greater possibility of decay. The quick removal of O₂ is imperative to slow down these ripening processes and extend post-harvest life.

ACTIVE CONTROL
Unlike conventional, controlled atmosphere technologies that make use of the passive natural respiration process to attain the correct atmosphere, Thermo King Magnum Plus Optima® provides active pull-down to replace O₂ with nitrogen (N₂) and the correct levels of CO₂ for the specific cargo. This immediately decelerates the ripening process so that produce is maintained at peak condition throughout shipping. Active technology allows for more precise control over the reefer environment.

BENEFITS
Putting the brakes on ripening accelerates profits. Magnum Plus Optima allows growers to harvest produce closer to natural maturity and peak flavor and to bring distant markets within reach for high-value produce. The unit is an option on Magnum Plus reefers, so adopting the new technology is easy. Optima means new customers and increased value at affordable cost.
Many global shipping lines currently utilize Thermo King controlled atmosphere technology, which complements the temperature control system inside the container by maintaining proper air quality and oxygen levels.

Thermo King’s remarkable new system decelerates the ripening process until the ship reaches its final destination, allowing growers to reach new customers and explore distant markets at affordable cost.

“When compared to passive systems that rely solely on the respiration of produce to eventually generate an initial atmosphere, active controlled atmosphere systems have the added benefit of promptly establishing and regulating the desired environment in the reefer container, thus more effectively extending the shelf life of the produce,” says Dr. Patrick Brecht, President, PEB Commodities, Inc., a consultation service provider for growers, shippers and transportation companies.

APPLICATIONS ARE VIRTUALLY UNLIMITED BECAUSE CO₂ AND O₂ CONCENTRATION CAN BE AS LOW AS 3% AND AS HIGH AS 21%.

Magnum Plus Optima uses nitrogen to adjust the atmospheric balance, so both O₂ and CO₂ can be maintained at specific levels.

THIS INCREASED CONTROL PROVIDES THE BEST ASSURANCE AGAINST LOSSES IN PRODUCT QUALITY SUCH AS:

- Delayed ripening, ageing and decay.
- Reduced water loss and weight shrinkage.
- Maintenance of firmness and crispness.

THE COMMERCIAL BENEFITS OF MAGNUM PLUS OPTIMA ARE EquALLY COMPELLING:

- Reduced post-harvest treatment of fruit.
- Fruit is shipped at a higher degree of ripeness, resulting in higher retail prices thanks to enhanced quality, taste, nutritional value and appearance.
- Prolonged storage life of products.
- Shipping is possible to more distant destinations and/or to new markets.
- Lower transport costs compared to air freight.
FRESH AND COOL.
SHIP TO SHOP.

GENSET SERIES

FRESH AND COOL.
SHIP TO SHOP.

GENSET SERIES

SG-4000 GENERATOR SET

The most advanced genset range ever created by Thermo King, the SG-4000 raises the bar in reliability and performance while exceeding the toughest environmental regulations in place today. Innovative architecture and environmentally sound advanced solutions enable the SG-4000 genset to perform in even the harshest conditions.

• Exceeds EPA Tier IV / CARB Emission requirements.
• Offers full ISO power requirement compatibility (15kW).
• Operates reliably in unforgiving marine environments.
• Utilizes user-friendly interface for error-proof operation.
• Includes full Thermo King service and parts support.

COMPLIANCE PLUS

Thermo King helps customers achieve Environmental Protection Agency (EPA) and California Air Resource Board (CARB) compliance in the USA while ensuring low lifecycle costs through reduced fuel consumption and predictable maintenance requirements.

ENGINEERED FOR RELIABLE PERFORMANCE

The SG-4000 platform features a highly innovative diesel engine and state of the art components like a reliable and efficient generator, and the advanced user-friendly SG+ microprocessor controller. A new architecture delivers optimum efficiencies, reliable power and lowest Total Cost of Ownership (TCO) across future emission-compliant, real-world applications.
FRESH AND COOL.
SHIP TO SHOP.

GENSET SERIES

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-3000 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 solution for many years. Shippers worldwide know it as the unit that will ensure an unbroken cold chain, no matter how demanding the conditions.

For use outside North America and Canada only.
TELEMATICS FOR GENSETS. SMART AND EASY.

Marine telematics systems typically produce tsunamis of data without the means to interpret it, which renders the metrics practically useless. That’s why Thermo King is introducing TracKing, the GPRS-based marine telematics solution that speaks your language. This combination of Thermo King’s profound knowledge of container refrigeration and best-in-class technology provides a new breed of asset-monitoring services. Asset and fuel reports have never been so easy to customize and understand.

SMART REPORTS

Make the most of your assets with fully customizable and extremely friendly reports based on your particular needs, delivered via email so you can access them on any device. With the most up-to-date readings that it’s possible to have on your genset, you can improve profitability with the fastest response time ever possible.

Be constantly informed about:

- Fuel efficiency.
- Asset utilization.
- Asset info.

SMART SERVICE

Whatever the routing, 24/7 support is never far away. 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. Just what you’d expect from the world leader in transport refrigeration.

SMART PRICE

Thermo King TracKing is within reach of all players in the cold chain thanks to a flexible, dynamic pricing model that responds to the real-world range of financial profiles. You can profit from the latest technology on the scale that perfectly suits your business.

TracKing already handles hundreds of thousands of devices and manages well over 2 million messages per day. Proven in the field, it’s the smart, easy solution for marine telematics.
Thermo King aftermarket parts are designed specifically for the extreme demands of marine reefer and genset applications, and are tested to the same high standards as original components. Protect your investment in Thermo King equipment by using genuine Thermo King parts 100% of the time.

MP4000 PERFORMANCE ENHANCEMENT KIT
The MAGNUM PLUS® with the MP400 controller established a new industry benchmark in efficient operation, performance, operability and reliability, designed to comply with the most stringent regulations. Good news: you can affordably convert your MAGNUM into a MAGNUM PLUS® unit with the MP400 Performance Enhancement Kit and benefit from other MAGNUM PLUS® options.

FRESH AIR. FRESH PRODUCE.
Take the guesswork out of fresh air exchange with AFAM+, a cost-efficient alternative to fully controlled atmosphere. This microprocessor-controlled system delivers superior temperature control and cargo protection with “ventilation on demand”, to provide fresh air in response to continuing changes in respiratory gases.

Genuine Thermo King replacement parts, engineered to provide optimal performance and maximum life, protect valuable equipment, critical cargo, and your priceless peace of mind.

REMANUFACTURED PARTS
Renew your fleet with Thermo King’s remanufactured parts, including controllers and PCBs, and further reduce your cost of ownership. Completely remanufactured to the highest standard, every component is tested extensively for reliable operation and warranty coverage equivalent to new parts’ warranties. Your repair investment is sound, regardless of its scope.

CONSUMABLE PARTS
Every component, no matter its size, is important to the overall performance of your unit. Designed for perfect fit and alignment with your Thermo King equipment, consumable parts deliver reliable operational efficiency, even in the most extreme working conditions.

ENERGY-SAVING SOFTWARE
Imagine your Magnum MP3000 using a patented technology to achieve better energy savings through adaptive refrigeration control algorithms and being compliant with ISO1496, like the MP4000 Magnum. It’s all possible with software updates.
We deliver ultimate assurance. Our quality products and services are recognized around the world for reliability, efficiency, and innovation. Our customers have peace of mind that Thermo King will keep them running at maximum capacity to grow their business. Thermo King, a brand of Ingersoll Rand, leads the world in manufacturing and innovating transport temperature control systems for a variety of mobile applications, including trailers, truck bodies, buses, shipboard containers and rail cars.

Thermo King currently has nine plants in six countries. Our customers get the same high product quality, whether we manufacture their units in Hastings, Wujiang, or Kolin. We are committed to providing products that are ecologically responsible and high performers. In addition, our people share a common commitment to prosperity through growth and international trade.

Our global network reach provides service almost anywhere in the world. We offer Thermo King service at every crossroads and in every port. When the customers can’t come to us, we go to them. Thermo King supports a parts and distribution system that can deliver any of 20,000 parts, anywhere in the world, overnight.

Even better than fast and efficient response to problems anywhere, is preventing them in the first place. Simulation analysis is part of our design process, so the breakdown points of parts and units are corrected in advance, not discovered in use. Our labs, the most sophisticated in the transport refrigeration industry, perform endurance testing to replicate the severe and extreme conditions in which our products perform. An extensive customer network monitors performance data of units in actual use.

Lastly, we believe training the best people is how we ensure that our customers get the fastest, smartest, most up-to-date service.

We have ultimate assurance in our quality products, reliable services, and expert people.
Thermo King is committed to being the world leader in transport temperature control. What started as simple ingenuity in 1938 continues to shape the global industry of transport refrigeration.

Wherever your business goes, our service and support follow. Thermo King backs you with a global network of certified dealer service technicians for buses, trucks, trailers, rail cars, and marine refrigeration units. We are 100% committed to keeping you running at maximum capacity and increasing your uptime, all the time.

The food distribution industry has relied on Thermo King’s refrigerated transport products for over 70 years for the freshest delivery of perishable goods. Our transport temperature control systems are built to go the distance. We make freshness go further, whether by rail, marine, truck or trailer.