

# 20/40

A publication for the seagoing container transport temperature control industry.

Winter 2008

*An Encore Like No Other:*

# MAGNUM PLUS



**A**s the founder of transport refrigeration, Thermo King has always been committed to engineering products and technologies to new levels, providing efficiencies and performance capabilities for customers across the globe. When the company introduced the MAGNUM® reefer in 2002, new science was introduced. It was ground-breaking. Energy consumption was reduced by 28%, compared to the then-leading reefer system, without compromising cargo care. It took five years for anything else on the market to even come close to MAGNUM's performance. But it's too late. Thermo King has once again raised the bar. And this time, it is to staggering heights.

#### The road to MAGNUM PLUS®

The design specification for the original MAGNUM reefer was written in 1998. It was clear, albeit with apparently conflicting goals.

- It would be the most efficient, yet the most powerful reefer available.
- It would offer the lowest environmental impact.
- It would be the lightest reefer available.
- It would offer the most advanced technology, yet be the simplest design.
- It would provide the lowest box temperature.
- It would provide the fastest pull-down.
- It would have the tightest floor spread.
- It would provide the finest temperature control available.

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**THERMO KING**

World Leader in Transport Temperature Control

# EcoPower Gensets *just got better!*

By Mike Stark, Sales Manager, Gensets

**J**ust eighteen months ago, Thermo King launched its SG-3000 Series of gensets and its optional EcoPower fuel saving technology. With the only electronic microprocessor controller in the genset industry, this technology combines the latest electronics to 'sense' not only the type of reefer it is powering, but also its mode of operation. Armed with this knowledge, the genset automatically determines the most energy-efficient operation mode – EcoPower or standard, while respecting the ISO1496-2 standard. As a result, operators get the most efficient operation possible while never compromising cargo care.

The benefits of this application of technology have been enormous. Fuel savings of more than 20% were easily achieved compared to its nearest competitor. This translates into approximately 300 gallons of diesel saved per genset, based on a 2,500 hours/annum operation. With fuel having been as high as \$4/gallon, this is as much as \$1,200/annum. In 2007, 95% of Thermo King gensets were sold with the EcoPower option, and at customers' requests, the remaining 5% were retrofitted in early 2008!

Now, Thermo King's engineers have topped this achievement. A year's worth of data from thousands of genset data loggers has helped them further improve on this industry-leading performance. And once again, they have done it while continuing to care for the cargo while respecting the ISO1496-2 international standard.

## Even more fuel savings

*Users of SG-3000 gensets with the new EcoPower PLUS option will save 30% or more fuel over traditional gensets.*

What if you bought an SG-3000 with standard EcoPower in the last 18 months? No worries. Simply contact Thermo King to learn how easy it is to upgrade your genset to EcoPower PLUS, and you too can enjoy these additional savings in fuel, along with reduced carbon emissions and greater security in the face of uncertain fuel costs going forward.

## Environmental benefits that really make a difference

While the fuel savings offered by EcoPower PLUS makes for a compelling story, the ENVIRONMENTAL benefits are equally outstanding, regardless of fuel price fluctuations.

Every gallon of fuel saved equals 10.1 kg of CO<sub>2</sub> emissions avoided. So implementing EcoPower PLUS will save 513 gallons/annum, avoiding 5.2 tonnes of CO<sub>2</sub> emissions per annum. Over 10 years, and a fleet of 1,000 gensets, this is 52,000 tonnes of reduced CO<sub>2</sub> emissions! Now that is real technological progress. Customers can become environmentally responsible without compromising cargo protection. Thermo King is proud to lead the industry in reducing the carbon footprint of genset users around the world.

## Imitators cannot compete with SG-3000 and EcoPower PLUS

Interestingly, a number of reefer manufacturers have introduced various energy-saving software 'solutions' in the recent past, in an effort to compete with Thermo King's MAGNUM® reefer energy efficiency. An EcoPower PLUS genset will burn LESS fuel if these software solutions are switched OFF, rather than left active. To put it in numbers, when compared to the nearest competitor, an EcoPower PLUS genset powering a standard reefer will consume approximately 35% less fuel with energy-saving software de-activated. If the energy saving software is activated, the fuel savings is 'just' 30%. How can this be true? It is the same principle car drivers use: holding a steady speed is far more economical when it comes to fuel consumption than stop-start driving. It is also a lot more comfortable for the cargo. With the SG-3000 genset and EcoPower PLUS, users also get the added benefits of decreased CO<sub>2</sub> emissions and proper cargo care.

**Want to learn more? Contact your Thermo King representative or visit [www.thermoking.com](http://www.thermoking.com)!**

## SG-3000 Series Generator Sets ... Now with EcoPower PLUS

One step ahead in genset technology and the industry leader in carbon footprint reduction

- ✓ Environmental benefits
- ✓ Fuel efficiency
- ✓ Reliability
- ✓ Flexibility
- ✓ Easy to operate



# SEABOARD MARINE Adds MAGNUM® to its Fleet

**O**cean transportation company Seaboard Marine recently joined Thermo King's MAGNUM® container reefer customer list, adding 200 units to its fleet in mid-November 2008. A wholly-owned subsidiary of Seaboard Corporation, Seaboard Marine was established in 1983 and provides direct, regular service between the United States and the Caribbean Basin, Central and South America.

The units were delivered to Seaboard Marine's primary operation site in the Port of Miami.

"We're excited to add MAGNUM to our growing fleet of equipment," said Clyde Wingate, manager of refrigeration services, Seaboard Marine. "The proven performance capabilities of this container reefer will compliment our commitment to meeting customer needs and delivering dependable service. The MAGNUM is the latest in our dedication to incorporating state-of-the-art technology into our operations."

Seaboard's fleet consists of 44 vessels and over 50,000 dry, refrigerated, specialized containers, and related equipment. The company provides cargo shipping service between the United States and over 25 countries and nearly 40 ports. A network of offices throughout the Caribbean Basin and Latin America maximize fleet utilization for both northbound and southbound cargo to and from the countries it serves.

Thermo King's MAGNUM unit was introduced to the container shipping industry in 2002 and addressed topics that were, perhaps, a bit ahead of the mainstream. With digital scroll compressor and combined with the world's most popular transport refrigerant, R-404A, the MAGNUM offered the greatest cooling capacity available along with reduced power consumption for energy efficiency and environmental responsibility.

"These cost-saving and environmental benefits were not fully realized by the industry until the past couple years," said Nora Beckjord, sales director, Americas, Thermo King Global Marine Solutions. "Today, more than ever, the MAGNUM is helping our customers ride out tough economic times and meet growing environmental mandates. It's exciting to have, not only, the technology, but the pioneering experience, to offer customers, such as Seaboard Marine, as they navigate through the industry challenges of today."

**More information about Seaboard Marine** can be found at [www.seaboardmarine.com](http://www.seaboardmarine.com). Details on the MAGNUM container reefer can be found at [www.thermoking.com](http://www.thermoking.com).





*An Encore Like No Other:*

# MAGNUM

*... continued from page 1*

PLUS

Thermo King engineers met the design challenges, and the MAGNUM® was launched in 2002. The rest, as they say, is history. MAGNUM's performance became the target for every manufacturer to emulate. It was not always so clear, even to the copiers. "There were, for instance, those who felt that energy consumption of reefers was irrelevant to the total cost of operation (TCO). That, apparently, has changed," said Dermott Crombie, vice president, Global Marine Solutions. "There were those who thought emissions were not an issue. Everybody has a responsibility for emissions, but it took some a little more time to recognise it."

To allow accurate performance comparisons, Thermo King surveyed the market and determined an energy matrix which could be used to allow objective comparisons of competing reefers under identical conditions. "That was done 10 years ago, and even that matrix has been copied," continued Crombie. "Back in 2002, we knew the MAGNUM would change how the shipping industry viewed refrigerated container performance. And as the market recognised the advantages of MAGNUM, customers have flocked to it."

## **The MAGNUM PLUS®**

The obvious advantages of MAGNUM caused a challenge for Thermo King. How could it be topped? The appropriate encore seemed to lie in taking the industry-leading – and proven – technology, and making it better. And so, over the past four years, Thermo King engineers once again looked at the original performance goals and worked to make the next generation of MAGNUM 'more of the same.'

- The most efficient, yet the most powerful reefer.
- The lowest environmental impact.
- The lightest reefer.
- The most advanced technology, yet the simplest design.
- The lowest box temperature.
- The fastest pull-down.
- The tightest floor spread.
- The finest temperature control.

The result is MAGNUM PLUS, a reefer that surpasses all reefers in the market today, INCLUDING the MAGNUM. Remember, in 2002 MAGNUM reduced the average energy consumption in the industry by 28%, compared to the then-market leader, across a mix of ALL cargo categories.

Through the application of new technology, and again WITHOUT cargo care compromise, MAGNUM PLUS achieves the seemingly impossible, putting it comfortably ahead of all new designs, and any 'solutions' offered for new or old equipment. MAGNUM PLUS retains Thermo King's lead in the industry, by improving the proven technology to perform at new levels ... levels that will meet the reefer industry's needs well into the future.



## MP4000 Microprocessor launched on **MAGNUM PLUS®**

"In ALL situations, the MAGNUM PLUS unit in standard mode outperforms competitive units operating in power-saving modes," explained Crombie. "There is no other mode with MAGNUM PLUS. It simply does not need one because it is so efficient."

The innovative approach of the MAGNUM PLUS ensures shipping lines can continue to meet obligations under bills of lading, avoiding costly litigation situations that can arise when cargo shippers' requirements are not respected.

MAGNUM PLUS simply looks after the cargo, with the lowest energy consumption possible. **It does not have any cargo limitations.\* It can be used on cold treatment, controlled atmosphere, modified atmosphere, de-humidification, dairy, meat, bananas, or whatever load is being carried. There is no questionable software mode to be invoked (or disabled!) for certain cargo categories.**

In addition, the pull-down time, unit weight, simplified design, and overall reefer performance has been further improved, leading the industry in every category.

"As we said back in 2002, if a customer were to get some competitive units for FREE, they would still cost more than a MAGNUM," said Crombie. "We are here again. In its lifetime, a MAGNUM PLUS saves over \$10,000 in energy costs compared to its nearest competitor ... all without cargo compromises. The value of MAGNUM PLUS over R134a digital scroll is greater than the purchase price of any R134a reefer."

To get here, seriously heavy mathematics and physics, along with improved technology were involved. We just wonder if it will take another 5 years for this to be copied.

Attendees of Intermodal 2008 in Hamburg were among the first to witness the future in marine reefer technology firsthand. If you missed it, contact your Thermo King representative to learn more.

Thermo King: PROUD to be the world leader in transport temperature control.

*\*You read correctly. There are NO cargo limits.*



**Simple in design and operation, the new MP4000 microprocessor offers sophisticated performance and accurate temperature control WITHOUT cargo compromise.**

**T**hermo King's latest goal was to take the already best-in-class MAGNUM® container reefer system to the next level ... more efficiency and performance, lowest environmental impact, lightest weight, most advanced technology, simple design, lowest box temperature, fastest pull-down, tightest floor spread, and finest temperature control were all a part of the challenge. The combination of proven digital scroll compressor technology and world-standard R-404A refrigerant were already doing their part. Fine tuning of the mechanical components allowed the retention of MAGNUM's reliable compressor, valves and coils, while new designs in the airflow channels allowed better efficiencies to be realized. These enhancements allow MAGNUM PLUS® to be the ideal choice for everything from fresh produce to deep frozen, reaching -40 degrees C if desired – another new benchmark in the industry.

In addition to refining the mechanical systems, Thermo King engineers also looked at the rest of the reefer again. Electronics have progressed enormously in recent years. Thermo King wanted improved software and processing capabilities, as well as hardware features that would be functional and provide a platform that allows future developments. The result was the MP4000.

The MP4000 is sleek, functional and features a unique and easy-to-use graphic/text interface. The controller boasts soft-keys that list active functions on the display, while hot-keys are available for immediate access to common functions. Simplified wiring, along with fewer parts and cable connections, make the MP4000 easy to service and trouble-shoot, giving it endorsements from technicians and operators, alike.

But the real advantages of the MP4000 lie within. Despite being simplified – in operation and design, it offers sophisticated performance and accurate temperature control without cargo compromise. In combination with the airflow channels, it allows the MAGNUM PLUS to offer greatly-reduced energy consumption. With zero cargo limitations, the MAGNUM PLUS with MP4000 maintains accurate temperatures for all product loads. It even extends to -40 degrees C for high-value, deep frozen loads.

No doubt, the MAGNUM PLUS is a quantum leap forward in Thermo King's latest container reefer design, raising the bar within the reefer industry and achieving the seemingly impossible.

# Green with Envy

**M**inimal environmental impact. Enormous power and fuel savings. Zero cargo limits. With a renewed product line led by the new MAGNUM PLUS® and SG-3000 series of gensets with EcoPower PLUS, there is no doubt that Thermo King has the industry green with envy. Are you ready to see how economical, safe and easy GREEN can be? Contact our sales and service professionals. They're ready to team up with you and show you real solutions.

Meeting customer needs yesterday, today and into the future ... that's what Thermo King is all about.

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# THERMO KING PARTICIPATES IN EXPORTER SEMINAR IN EGYPT



*Speakers at the seminar represented Kuehne + Nagel's reefer and Egypt teams, AON and Thermo King.*



*Pietro SONZA REORDA, product manager for Thermo King, discussed risk management in refrigerated transport, as well as best practices for growers and shippers.*

**'Risks and Liabilities in the Reefer Perishable Business'** was the theme for a late October seminar focused on Egypt's emergent export business. Sponsored by Kuehne + Nagel, a global leader in international forwarding, the event, which took place in Cairo, attracted 80 people from 40 companies.

"Egypt's export business is growing fast, particularly towards the European Union, Eastern Europe and North America," said Pietro SONZA REORDA, product manager, Thermo King Global Marine Solutions. "This was a great opportunity for industry experts to share insights, shipping requirements and solutions to Egypt exporters."

"Thermo King has always been committed to our customers' customers as understanding their needs and challenges allow us to better support them with products and services. Our advancements in reefer, genset and container environment management technology are all examples. Kuehne + Nagel did a great job organizing the seminar, and we were happy to participate."

Thermo King was a guest speaker on risk management in refrigerated transport and best practices for growers and shippers. Other speakers included the Kuehne + Nagel reefer and Egypt teams, along with AON, liability experts from Germany.

Kuehne + Nagel ranks among the top three worldwide contract logistics players after acquiring ACR Logistics in 2006. It delivers integrated solutions across the supply chain and takes pride in turning companies' logistical challenges into real competitive advantages. Founded in 1890 in Bremen, Germany, Kuehne + Nagel has more than 53,000 employees at 850 locations in more than 100 countries. The company's services include seafreight, airfreight, road and rail logistics, and contract logistics.

More information on Kuehne + Nagel can be found at  
<http://www.kn-portal.com>.





### New Genset Sales Manager for North America

Mike Stark, field service and parts manager for Thermo King's Global Marine Solutions, has accepted additional responsibility as the genset sales manager for North America.

"Mike brings a wealth of technical experience and industry contacts to his new role, with more than 10 years providing solutions to the shipping industry as a field service and parts manager," said Dermott Crombie, vice president, Global Marine Solutions. "His knowledge in the shipping and leasing industry makes him highly qualified to assume the challenges of this additional assignment."

Mike's responsibilities are all representative of Thermo King's ongoing goal of providing the service and technological and environmental product qualities customers need to meet today's industry challenges. They include:

- working with shipping lines to ensure they have the latest technology available to them so that they can provide low-cost solutions in power generation
- working with Thermo King's marketing and engineering teams to provide total solutions in the genset product line
- driving continuous customer satisfaction for lowest Total Cost of Ownership
- Providing technical solutions to Thermo King's dealer network, shipping and leasing customers
- Providing data to Thermo King's engineering team to continually improve products
- Working with Thermo King's aftermarket marine group to ensure availability of key parts
- Providing 'best practice programs' to dealers, shipping and leasing customers to dramatically reduce maintenance and repair costs.

"I'm excited to work more closely with the genset product line and share with customers our industry-leading product performance specifically with fuel savings and emission reductions," said Mike.

See Page 2 for more on the latest innovations within Thermo King's SG-3000 series of gensets.



### On the Move

To strengthen Thermo King's service support in Asia, Hans Bax, field service and parts manager, has re-located to Singapore. Previously responsible for Mediterranean and Middle Eastern countries and residing in the Netherlands, Hans is now responsible for servicing the entire Asia Pacific region from Japan to India, with the exception of Hong Kong, Taiwan and China. In addition, he continues support of Hapag-Lloyd in Hamburg.

**Hans can be reached at +65 97578011 or [hans\\_bax@thermoking.com](mailto:hans_bax@thermoking.com).**

### Jerry Kiesner Retires After 38 Years

There are not many people who can boast 38 years with the same company. Jerry Kiesner is one of the few, throwing in his hat in late September to enjoy 'other things' in life.

"It's been a great ride," said Kiesner. "I started in the factory, building units as an hourly employee back in 1970. Through the years, I worked hard and was given advancement opportunities and training. Achieving what I did, without a college degree, is pretty rare these days."

In 1976, Jerry stepped into the management side of things, working in production control, engineering, manufacturing, the Education Center, and truck/trailer product service. It was 1989 when Jerry moved to the aftermarket business and helped with the evolution of Thermo King's container business. He remained within the Marine Solutions side of aftermarket until retirement. His final, official title was director of sales & marketing, Aftermarket, Marine Solutions.



**Jerry celebrates his retirement from Thermo King with his wife, Sheri.**

Because of Marine Solutions small, yet global market, Jerry traveled the world to meet and assist customers. "I loved that most ... the interaction with customers and people within the organization. I'm also missing that the most. Because of the nature of this business, I have friends and acquaintances on every continent. I'm very fortunate. I thoroughly enjoyed my time with Thermo King," said Kiesner.

What's next? Jerry is busy with a home remodeling project (that keeps growing). "My 'honey do' list has been neglected for a while, so I'm busy getting my house in shape right now!"

He's also spending more time with his wife, 3 grown children and 6 grandchildren, but he's not ready for a full-time fishing and golfing agenda. According to Jerry, he plans on finding a part-time job for "something to do" at least for a few more years. "I don't want to get bored!"

"I'm excited for the opportunity to work with the intra-Asian transport routes and provide additional customer service support including technical and commercial training ... Support that will help customers grow in the Asia Pacific region," said Hans. "There are many opportunities for expansion with Thermo King's technologically-advanced products such as the Advanced Fresh Air Management system (AFAM+) in countries like India, Thailand and Vietnam or the industry-exclusive Super Freezer system – perfect for tuna transport."

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