

20/40

A publication for the seagoing container transport temperature control industry.

Spring 2014

JAPAN'S KYOWA SHIPPING EXPANDS FLEET WITH MAGNUM PLUS® REEFERS

**-40 C CAPABILITY
TO SUPPORT
TUNA EXPORTS**

KYOWA SHIPPING HAS ADDED 25 THERMO KING MAGNUM PLUS™ UNITS to its growing refrigerated fleet, choosing the technology primarily for its -40 C freezing capability.

"Working with EF International Ltd. (EFI), we were excited to learn about the MAGNUM PLUS deep frozen capabilities, which will provide ideal transport temperatures of tuna, a premier cargo

continued on page 7...



Page 2 A Note from Michel van Roozendaal
Page 3 Innovative Smart-PTI Technology
Can Save Big Money
Page 4-5 Industry News!

Page 6 SG-4000 Genset is Superior Technology for
Effortless Compliance
Page 8 Power Up with Thermo King



THERMO KING

World Leader in Transport Temperature Control



A note from Michel van Roozendaal, Thermo King's vice president & general manager of global marine

A POSITIVE OUTLOOK

First of all I would like to thank all of our business partners for your support and confidence in 2013. Our overall business climate is far from easy, and the shipping and maritime business continues to face many challenges. Nevertheless, Thermo King experienced a reasonably good year, and we were happy to see some decent growth versus 2012. It is now our aim to continue that growth in 2014 by delivering exceptional customer service and offering industry-leading products that are innovative and technologically-advanced.

Shipping of Food and Perishables

The global container shipping lines are adjusting to lower growth rates, which have become the "new normal." Essentially, container volume grew for many years much faster than GDP (2x or more). These growth rates have come down as a result of the recent economic crises, and most analysts don't see a recovery. Positively, the perishable reefer trade remains resilient to adverse economic conditions and future growth for perishable cargo volumes is inevitable. Population and GDP growth levels will see continued trade increases for the coming years. What we see also with our customers is that there is a greater attention to reefer performance. The ability for the reefer to deliver -35 C is increasingly seen as a new standard. Indeed, this capability is needed for shipping lines when competing for cargo.

Gensets - Impact of Environmental Legislation

In January of 2013, California Air Resources Board (CARB) legislation came into effect. The regulations effectively defined emission standards for gensets not just in California, but throughout the United States and also in other countries like Brazil and elsewhere. Shipping and leasing companies are adhering to CARB legislation as they realize that non-compliant gensets have much lower resale value and obvious limitations in use. We are seeing our customers "voting with their feet," and we are very pleased with the positive reaction our new generation SG-4000 genset has received in the marketplace! See more about this product on page 6.

2014 Progress and Improvements

Thermo King Marine realizes that the market is going through many changes, but we remain cautiously optimistic about 2014 and look forward to making this another successful year. The year has started positively as we have gratefully received a repeat order from Yang Ming Line and have secured orders from a couple Japanese shipping

lines. Read about Kyowa Shipping on page 1. As for myself, I spent time in Asia with our customers in Korea, Japan, Hong Kong and Singapore, where I was able to meet with customers and learn more about their business needs and challenges.

Also in Asia, our Wujiang factory is conducting a Value Stream event aimed at further improving the processes in this specialized reefer factory. The event is representative of our global commitment to operate leaner and more efficiently. We have invested in Wujiang over the last years, improving the production line, providing specialized training to workers and adding an extra shift – all in response to growing product demand. The facility is buzzing with activity, and the team in Wujiang is very committed to the Marine business.



(Front left to right): Ms. Fukuda, Kyowa Shipping; Mr. Uede, Kyowa Shipping; Michel van Roozendaal, Thermo King; Mr. Fujita, Kyowa Shipping; (Back left to right): Mr. Kimata, EF International; JJ Foo, Thermo King; Ms. Matsuno, Kyowa Shipping; Christopher Sun, Thermo King; and Mr. Nakao, EF International

In addition, our commitment to new product development and innovation remains strong. We are looking forward to bring some leading edge innovative solutions to the market, including an atmosphere control unit that, we believe, offers something special to the industry.

To conclude, despite market conditions being far from ideal, we are pleased with how 2014 has started. I look forward to meeting with you during the course of the year to listen to your insights on how Thermo King's products and service can help improve your business.

Michel

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Michel van Roozendaal

Vice President & General Manager
Global Marine, Global Rail & EMEA Bus Solutions • Thermo King • Ingersoll Rand

INNOVATIVE SMART-PTI TECHNOLOGY CAN SAVE BIG MONEY

Is it Time to Implement in Your Fleet?

One of the countless innovative capabilities of Thermo King's market-leading MAGNUM PLUS® reefer is the SMART-PTI, an advanced pre-trip inspection operation made possible through the advanced MP-4000 controller. SMART-PTI can save operators \$200+ per year, per reefer by allowing a full PTI anytime or anywhere the reefer is operating – empty or loaded.

SMART-PTI was introduced in late 2012 and benefits are now being realized in manpower and energy savings. "Innovation and cost savings are always welcomed by the industry, but the actual implementation of new procedures takes a commitment to process change," said Kay Henze, global sales director, Thermo King Marine. "Everyone seems to agree on one thing: someday SMART-PTI will be a standard in the industry."

Operating Smarter

SMART-PTI is made possible through the technological advancements of the MAGNUM PLUS MP-4000 controller. A smarter control strategy has allowed capabilities that offer real operational cost savings.

Essentially, SMART-PTI events are logged automatically. While the MAGNUM PLUS is operating, unit performance is being monitored and the results are stored in the controller memory. When the SMART-PTI is completed, the results are shown on the controller display. A simple visual check of the display will determine if the container will go into the green-tagged, ready-for-use stack, or if further checks might be needed. A universally-understood smiley face is shown when the reefer has passed the PTI inspection.

The SMART-PTI remains valid for whatever period the shipping line feels appropriate, typically 30 days. An operator can request SMART-PTI results at any time by accessing the controller keypad or remotely, if the unit is equipped with a Thermo King remote monitoring system.

"Not having to operate a unit through a normal PTI test will save up to three hours in running time (electrical power) if a full PTI is performed," said Arlo Eslinger, global service director, Thermo King Marine. "This does not include the labor time required for operating the unit through a PTI test and moving the containers to a PTI station.

"Data indicates that this translates into a \$200+ annual savings per reefer. That is based on a global average of refrigerated containers being loaded four times per year. Of course, these savings go up considerably for short sea carriers or fruit companies that make more frequent turns."

The Future

Advancements in remote monitoring capabilities will continue and fleets worldwide will adopt the technologies, not only because they are committed to operating safer, smarter and more innovatively, but also because expectations and regulations will require it.

"Governing agencies and customers already expect confirmation of load quality and transport safety. Thermo King's SMART-PTI tool is an extension of these growing requirements and will be another way for fleets to document their procedures while turning containers around faster. This, of course, will lead to greater profitability," said Henze.

For more information about SMART-PTI capabilities contact a Thermo King representative or visit www.thermoking.com.



THERMO KING BUSY THROUGHOUT FINAL MONTHS OF 2013

Thermo King representatives found themselves very busy during the final months of 2013, participating in industry tradeshows, networking events, professional panel discussions, dealer meetings and more. "We traveled from Hong Kong, to Antwerp, to Rotterdam, to Berlin, to Brazil, to Thailand, and back again," said Michel van Roozendaal, Thermo King vice president & general manager, global marine, rail and EMEA bus. "Meeting customers and industry professionals, while sharing our industry-leading products and 75-year history was extremely valuable for all who participated."

In September, **ASIA FRUIT LOGISTICA 2013** attracted more than 6,500 top decision-makers from 64 countries to Hong Kong. Exhibitors represented 372 companies and 37 different nations, bringing together a valuable combination of business, networking and learning opportunities. Thermo King was there networking with shipping line customers and fruit shippers. The **MAGNUM PLUS®** was a featured unit in OOCL's stand.

The annual Antwerp Reefer Golf Tournament took place in September at Reymerswael Golfcentre in the Netherlands, attracting more than 100 participants within the Maritime Shipping industry. Started in 2006 by Gary Meers of Mega Engineering and Frank Roovers, SeaCube Containers, the event is designed for fun and networking within the industry. Thermo King is one of many sponsors.

More information about this event can be found at <http://www.antwerp-reefer-tournament.be/>



(Left to right): Jan Ryckbosch of OOCL poses with Thermo King Marine Solutions representatives Michel van Roozendaal, vice president & general manager; Kay Henze, global sales director; and Willem Fourie, field service manager.

The 5th annual Cool Chain Logistics Global Conference was held in Rotterdam in late September. Under the title of Transparent, Efficient and Fair: Charting a New Course for Global Perishable Supply Chain Operations, the conference addressed many tough questions and issues the industry faces including:

- What really happened to reefer rates in 2013?
- What should perishable shippers be planning for in 2014 and beyond?

- What are the long term implications for global trade in perishables?
- Are there new ways to address equipment supply constraints?
- Could dedicated reefer shipping services experience a renaissance?
- What can be done now to address the continued tensions on both sides and create more openness and transparency?



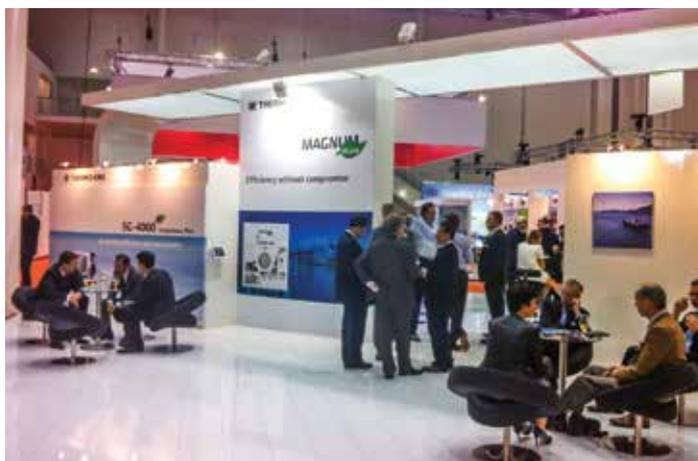
Thermo King's Kay Henze, global sales director, Thermo King Marine, participated in an hour-long question and answer session following a presentation about the reefer container supply, utilization and availability.

(Left) Thermo King's Kay Henze was part of an expert panel answering industry questions related to reefer container supply, utilization and availability.

Intermodal Europe is the global leading container transport and logistics event and is always a highlight for Thermo King Marine. The 2013 conference took place in Hamburg in October.

Offering a full programme of informative conference sessions running alongside a comprehensive exhibition, Intermodal Europe is considered an important event for container transport and logistics professionals to discuss current topics in the industry and to witness new products. And the 2013 conference did not disappoint.

Thermo King's booth showcased the **MAGNUM PLUS®** reefer and new **SG-4000** genset. Which was officially launched at the show. Intermodal Europe regularly attracts key shippers, shipping lines, container professionals and those involved in the intermodal supply chain.



INDUSTRY NEWS!

The FENATRAN 20th International Transport Industry Tradeshow, which was held in Sao Paulo, Brazil in late October 2013, promoted products and services for cargo transporters and logistic operators. The fair was a dynamic exhibition of global launches to thousands of the transportation sector professionals in attendance.

Thermo King's booth highlighted the SG-3000 genset, equipment not well known within the Brazilian transport community. "We visited with many customers – both existing and potential – about our equipment offerings and advantages," said Rafael Gonzalez, field service and parts manager, Thermo King Marine. "A show highlight was the delivery of the first two SGCO-3000 gensets sold in Brazil, bought by REEFERCON, a marine dealer in Santos, Brazil."

REEFERCON General Manager Sergio Cunha said, "The SGCO-3000 genset will help to increase our business and focus in cold chain quality for special products like chilled meat. EcoPower™ technology will provide a savings that will improve our operation, and the ComPosIt system will provide customers a tool to control equipment logistics and improve total reefer operation."

EcoPower is an energy saving operation mode defined by hardware and software enhancements and Thermo King patented technology. More than 20 percent fuel savings, when compared to competitive gensets, has been documented by SG-3000 gensets with EcoPower. Thermo King's ComPosIt is an advanced wireless remote monitoring system that allows genset unit global positioning, remote monitoring, WEB-enabled fleet monitoring and full integration with Thermo King's industry-leading SG+ controller.



(Above) Eduardo Mendes, REEFERCON Commercial Department (left) and Sergio Cunha, general manager & owner, REEFERCON, pose by a new SG-3000 Genset.

Thermo King Marine held its annual Dealer Meeting in late October 2013 in Pattaya, Thailand, bringing 115 dealers from all parts of Asia, China, Japan, Korea, Australia, New Zealand, India and Pakistan together. 2013 accomplishments were reviewed and the foundation was laid for a successful 2014.

During the meeting Thermo King introduced the SG-4000 Tier IV genset, which meets and exceeds all environmental regulations, and provided updates on the features and options of the MAGNUM PLUS® like its lowest energy consumption, fastest pull-down, best temperature control, and SMART-PTI offering. Other products discussed included the AFAM+ system and the SuperFreezer, Thermo King's ultra-low temperature unit.

"Time with our valuable dealer network allows us to share information and ideas. It also is the perfect opportunity to reiterate that every product Thermo King develops or innovates is done with our customers in mind," said Michel van Roozendaal, Thermo King vice president & general manager, global marine. "We want to provide solutions that will help our customers operate more efficiently while providing the highest quality product to the world and ensuring the environment is protected for generations to come. To be successful, we need to continue working in tandem with our worldwide dealer network."

Arlo Eslinger, global service director, Thermo King Marine, and van Roozendaal hosted this very successful two-day event.



UPCOMING EVENTS:

Seafood Expo North America & Seafood Processing North America (Formerly International Boston Seafood Show/ Seafood Processing America) – March 16-18

Boston Convention & Exhibition Center, Boston, MA, USA
<http://www.seafoodexpo.com/north-america/>

Intermodal South America – April 1-3

Transamerica Expo Center, São Paulo, Brasil
<http://www.intermodal.com.br/en/>
Visit Thermo King at Booth B180!

Intermodal Asia 2014 – April 1-3

Shanghai World Expo Center, Shanghai, China
<http://www.intermodal-asia.com/>

SG-4000 GENSET IS SUPERIOR TECHNOLOGY FOR EFFORTLESS COMPLIANCE

WHEN THERMO KING INTRODUCED THE SG-4000 GENERATOR SET (GENSET), IT LAUNCHED MUCH MORE THAN JUST A NEXT-GENERATION GENSET.

It launched its most advanced genset platform available, with an innovative architecture that delivers best-in-class performance and lowest overall cost of ownership. It re-defined efficiency and sustainability through technological leadership not seen before, offering dependable operation and lower maintenance costs.

The SG-4000 also remains the ONLY genset solution on the market that complies with the world's most stringent emission regulations – Environmental Protection Agency (EPA) Tier IV and California Air Resources Board (CARB) – without the need for additional components and corresponding annual compliance checks.

“The SG-4000, which became available last year and is offered in both clip-on and under-mount configurations, is being adopted by more and more fleets as the industry’s long-term compliance solution in gensets,” said Mike Stark, sales director, Thermo King Marine. “The new genset offers the technological advancements that exceed the environmental regulations and offer industry-leading standard improvements that reduce nitrogen oxide, particulate matter and carbon dioxide emissions while offering reliable, fuel-efficient performance.”

“Hundreds of units are being commissioned or are already in service throughout the USA, offering clear evidence of adoption of this new technology by major shipping lines and cargo owners. We are receiving positive feedback about the telematics option that comes with the new SG-4000. The technology allows timely tracking of assets and improves communications with end customers in regards to expected delivery time of goods,” said Stark.



The SG-4000 genset platform is supported by Thermo King’s network of more than 550 factory-trained and certified dealers throughout the world.

Contact a Thermo King dealer to learn more about this innovative technology.

Key Features and Industry Differentiations

Feature	Thermo King SG-4000	Carrier® PowerLine®
Compliance	Compliant with CARB and EPA Tier IV Emission regulations for greater-than-25 HP engines for operational life of the product (12+ years)	Compliant ONLY with EPA Tier IV emission regulation for less-than-25 HP engines Requires additional diesel particulate filter (DPF) before 3,000 hours of operation for compliance with CARB after 7 years of operation (Approximate Costs: DPF - \$3000, Annual Cleaning Fee - \$1000)
Engine	Common rail 1.6L high pressure diesel injection system with turbo charger Advanced electronic engine control to optimize HP, torque and response to changes in load	2.2L diesel direct injection No electronic engine control
Operation	Easy to use SG+ microprocessor controller for engine control and data management; multi-language Integrated data logger and data communication interface Option for integrated telematics for wireless remote monitoring	No controller or display No data logging and communication interface No telematics option

Source: Carrier® marketing material 2013, subject to change without notice.

JAPAN'S KYOWA SHIPPING EXPANDS FLEET WITH MAGNUM PLUS® REEFERS

... continued from cover

assigned to our South Pacific route," said Kazunari Uede, Kyowa Shipping director. "We are always looking for ways to provide value to our customers, and the MAGNUM PLUS will give them quality product and peace of mind."

All 25 MAGNUM PLUS reefers have been delivered and are in service.

"Kyowa Shipping is committed to its customers and global market growth," said Harumi "Harry" Nakao, EFI managing director. "This is why they were attracted to the MAGNUM PLUS for their tuna cargo. They understand that innovation and dependable technology translates to better service and quality product. No other reefer can provide -40 C today."

"Also of note," continued Harry, "is that the MAGNUM PLUS is multi-purpose. It can be used for fresh product just as effectively as frozen. It offers flexibility that will take it from route to route, and product to product."

No matter the temperature at which the MAGNUM PLUS is used, it will offer Kyowa Shipping the lowest energy consumption, the fastest pull-down, the tightest floorspread, and the most advanced controller available on the market today.

"We are excited to welcome Kyowa Shipping to our customer list and to grow our presence in Japan," said Christopher Sun, sales director, Thermo King Marine. "EFI's support has been instrumental in helping deliver the service and quality products that Thermo King has developed throughout its 75+ year history. We are excited to help Kyowa Shipping grow its service capabilities throughout the coming years."

Kyowa Shipping operates nine shipping vessels – five of which are owned, on three main routes: the South Pacific, the Micronesia, and the Paradise (Papua New Guinea, East Australia). Founded in 1974, Kyowa Shipping has been a leading service provider in ocean transportation to South Pacific islands from the beginning but today supports customers on a global basis utilizing its 40 years of experience and knowledge.

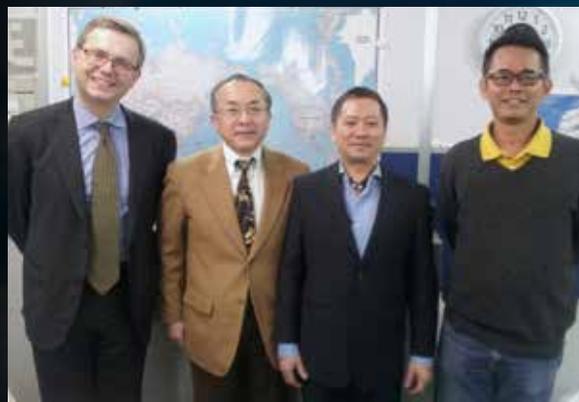
More information can be found on
Kyowa Shipping at www.kyowa-line.co.jp/en

EF INTERNATIONAL LTD. (EFI) IS NEW THERMO KING AGENT IN JAPAN

Thermo King was pleased to secure partnership with EFI in July 2013; working closely to promote Thermo King's marine products with Japan's shipping lines. Under the direction of Harumi "Harry" Nakao, EFI was established in 2010 to service growing Japan shipping businesses.

"Harry previously worked for Triton Container, a container leasing company, for 26 years. His extensive industry experience has yielded an excellent business network and rapport with Japanese shipping lines and lessors," said Kay Henze, global sales director, Thermo King Marine. "His knowledge of the industry and the relationships he has built through the years make him a wonderful partner in promoting Thermo King's industry-leading products and services."

The partnership with EFI was instrumental in securing Kyowa Shipping's order of 25 MAGNUM PLUS units.



Michel van Roozendaal, vice president & general manager global marine, rail and EMEA bus; Harry Nakao, managing director, EFI; Christopher Sun; sales director, Thermo King Marine; and JJ Foo, sales director, Thermo King Marine.

A large white refrigerated container with the KYOWA logo and name. The logo consists of a blue rectangle with the word "KYOWA" in red. To the right of the logo, the word "KYOWA" is written in large, bold, blue letters. On the right side of the container, there is a small yellow triangle with a black exclamation mark, and some technical specifications like "TCLU 119130" and "450".

KYOWA KYOWA

POWER UP WITH THERMO KING



THERMO KING HAS BUILT A 75-YEAR REPUTATION OF PROVIDING BEST-IN-CLASS PRODUCTS AND SERVICE TO ITS CUSTOMERS THROUGHOUT THE WORLD. That reputation transcends to the company's aftermarket parts offerings, with the same quality and reliability that is expected from the transport refrigeration leader. This peace of mind cannot be overlooked, especially with consumable components that are relied upon every single day within reefer operations.

"Power cable and plugs are vital components to safe, reliable reefer operations," said Petter Enander, aftermarket director, Thermo King Marine. "Thermo King offers these consumables not only with competitive pricing, but with Thermo King's reputation of quality and a 90-day warranty.

"We have improved our parts warehouse inventories and are offering consumables that meet or exceed industry specifications. Now is the time to take a look at Thermo King's offerings."

Power Cables are available in various lengths and either 10- or 11-gauge to meet varying customer needs. Power plugs are individually packed for convenience and reliability.

Thermo King's commitment to quality, innovation and customers does not waiver ... and that holds true for all of its products, including Aftermarket parts. Why trust anyone else?

Contact your local Thermo King dealer or service / parts manager today to learn more about Thermo King's power cable and plug options, or any of the company's consumable product offerings.

To find a Thermo King dealer, visit our Dealer Locator at www.thermoking.com



TK#452271

Thermo King's 1,000 feet (304.8 meters) spool of 10-gauge, 4-strand power wire is the most commonly purchased power cable option.



TK#411976

Thermo King's Power Plug comes standard at 32 AMP, 500 Volt, 3 Pole.

20/40



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