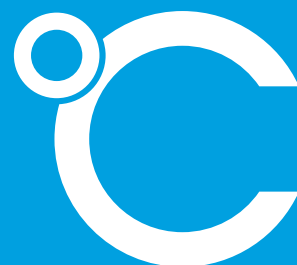




Spring 2014

THE NEWSLETTER FROM DAIKIN REEFER



DEGREE CELSIUS

Controlled Atmosphere system

Meet the Controlled Atmosphere (CA) development team and find out how Daikin is moving ahead with developing the system

Developing Russia's reefer service

Fourth dealership contract and Russian language reefer service manual launched

Successful road transport trials in South America

Truck transport provides swifter spares service in Brazil

207 Global Customers

201 Customers
Dole Latin America
Pacific Seaways

179 Customers

164 Customers
Cosco | Cronos
KMTC | Waterfront

134 Customers
China Shipping | Cargostore
Dong Fang | TAL | AEL

107 Customers
Dole Philippines
US Army | Beacon

85 Customers
Titan | APL

2014

2013

2012

2011

2010

2009

2008

Daikin passes the 200 customer mark

Dole Tropical Products LA become Daikin's 200th customer



Welcome

From Katsuhiro Tetsuya, Director of Daikin Reefer
Container Sales Division



It's an honour to present the Spring 2014 edition of the Daikin Reefer newsletter, issued to coincide with two major industry exhibitions taking place at the same time in very different parts of the world. The long-running Intermodal South America show returns to Sao Paulo, Brazil, 1-3 April, while the first ever Intermodal Asia exhibition will be staged in Shanghai, China on the same dates. Both Latin America and Asia are very important markets for Daikin and naturally we will have a presence at both of these industry gatherings.

It's well known that China is now the second largest economy in the world. While the country is undergoing some challenging times as its economy moves from a pure export-oriented base to a more balanced mix of domestic activity and consumption, GDP is still forecast to grow at 7-8% over the next few years. Of course, China's increased emphasis on consumer spending and imports has implications for the future volume of refrigerated trade. It's forecast that there will be considerable growth in the import of beef, pork and a variety of fruit and vegetables from Europe, the USA, Latin America and Australasia over the coming years.

China's increased emphasis on consumer spending and imports has implications for the future volume of refrigerated trade

Daikin already has a strong position and brand recognition in China, thanks to our air-conditioning production plants and sales there. Also, the LXE and Zestia refrigerated container machines are both now manufactured at Daikin Refrigeration Suzhou (DRS), to the north of Shanghai. DRS started production in 2008 and has manufactured more than 70,000 units as of this fiscal year. For the coming fiscal year, we expect DRS to build some 20,000 units.

We hope to meet many customers, buyers, and users at the Intermodal Asia exhibition. We're also happy to tell you that we recently passed the 200th customer milestone. Our memorable 200th customer is Dole Tropical Products Latin America and it is very rewarding to be approved by such an important company in the fruit export trade of this region. We will continue to strongly promote our machines in Latin America, and to invest in developing a comprehensive after-

sales support network. You can read more about the Dole order and our Latin service network developments in this edition. And if you are planning to attend Intermodal South America, please do kindly stop by our booth.


We're fully engaged in developing the Daikin controlled atmosphere system to extend the shelf life of fresh produce, enabling longer transit times

It is obvious that many shipping lines recently have been seeking ways to reduce costs and improve operating efficiencies, such as larger vessels, alliances, and other business tie-ups. Technology also has an important role to play. Daikin is committed to helping ocean carriers minimize operations costs and maximize operating efficiency and value. Moreover, as you can read in this issue, we're now fully engaged in developing the Daikin controlled atmosphere system (CA) as an option for extending the transport and shelf life of fresh produce, which will also enable longer transit times. I hope you enjoy the interviews on p5 with our CA development team members, who are passionate about taking a big leap in CA technology.

We are continuing to focus on expanding support to resale market dealers in key regions such as Europe, Russia, China, Oceania and the Americas. This includes our "Touch and Feel" training seminars, where attendees have the chance to see and explore Daikin reefer technology. Feedback on these seminars remains very positive and we are now busy planning further editions in areas such as South Korea, Singapore and the USA.

Customers of Daikin can count on us to continuously invest in improving the functionality, performance and reliability of our products, as well as in upgrading our support to users. We would like to thank you all for selecting and supporting Daikin for your refrigerated container equipment needs.

Katsuhiko Tetsuya
Director
Reefer Sales Division



As a world leader in air-conditioning, Daikin is developing a new Controlled Atmosphere solution to further reduce fruit ripening during storage and transportation.

Daikin technologies

Daikin moves ahead with Controlled Atmosphere (CA) system development

As reported in the last issue of our °C newsletter, Daikin is now moving ahead with the development of a brand new integrated controlled atmosphere (CA) system. The goal of the project is to help clients in the fresh produce markets extend the lifespan of sensitive perishable cargoes.

Fresh fruits, vegetables and flowers are living organisms which continue to respire during transport, absorbing oxygen and producing heat and carbon dioxide. This process, which accelerates produce maturity and shortens storage life, can be slowed down by the application of CA in combination with good temperature control. CA works by rebalancing

the amount of oxygen (O₂), nitrogen (N₂), and carbon dioxide (CO₂) in the air, with a dramatic reduction in O₂ density helping to slow the ripening process.

As a pioneer and world leader in the air-conditioning field, including innovative air-related technologies for demanding medical applications,

Daikin will bring its extensive experience to bear in developing a new CA reefer solution. In this issue, we are pleased to highlight the key points of the new system and introduce you to the talented engineers and designers who are leading the development project.

Key points of Daikin's CA system

Compact size but high performance Daikin's new CA system is based on patented Vacuum Pressure Swing Absorption (VPSA) technology using the mineral adsorbent Zeolite. The technology can quickly capture a large quantity of N_2 from the air and enables O_2 density to be rapidly reduced. The air separation process takes place in two adsorption tanks, after which the nitrogen-rich stream is fed into the container, with oxygen vented to the outside. The high efficiency of the technologies enables the CA system to be downsized, saving on weight and space.

High reliability

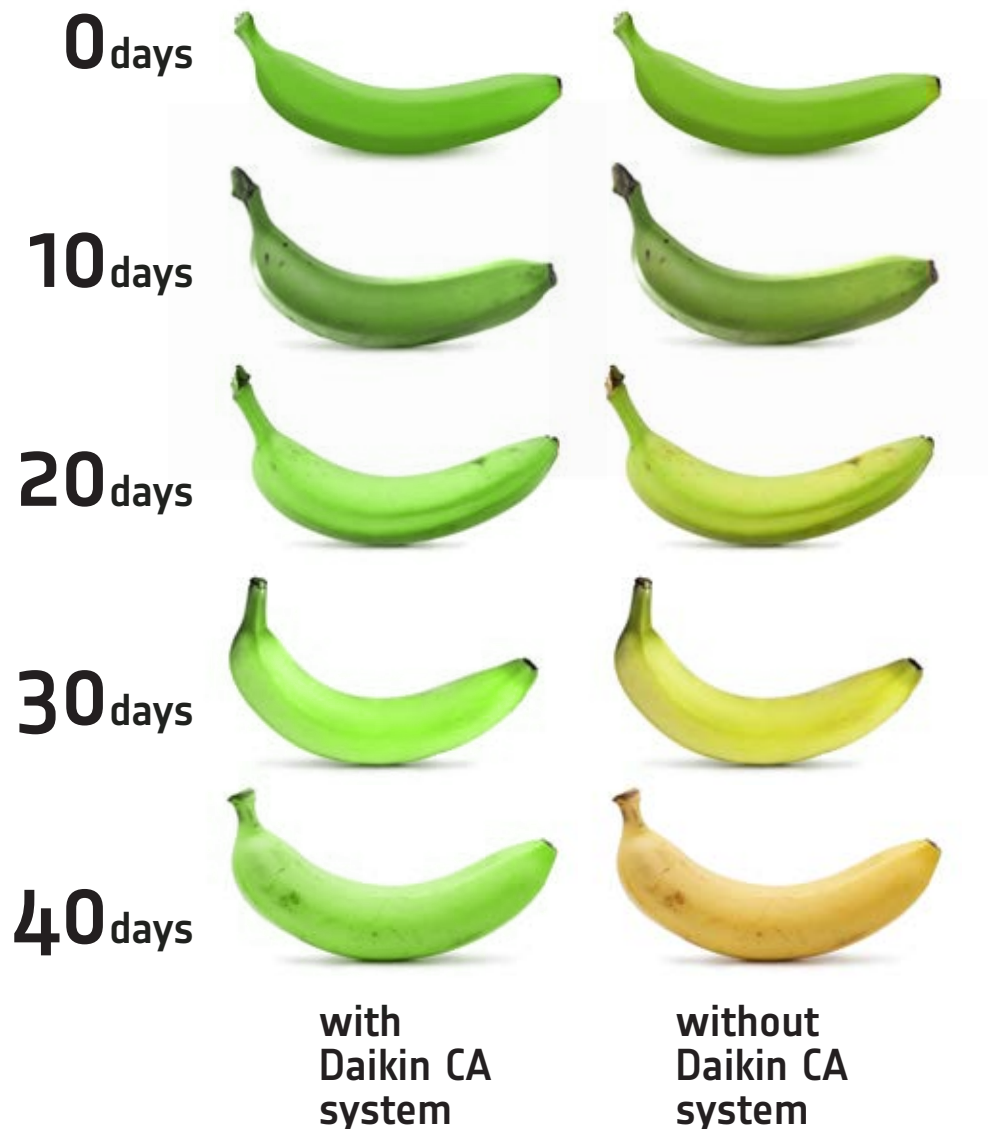
Daikin's oxygen concentrator developed for medical use has already proven its extreme reliability in critical applications. This device requires extreme performance precision and quality, and Daikin has emerged as a leader in this highly-skilled technique. This advanced technology will now be applied "in reverse" to the CA system, making it possible to separate a very high density of nitrogen from the air.

Rapid O_2 reduction

Daikin's pressure system drastically reduces the intrusion of O_2 into the

container from the outside. This in turn inhibits the ability of fresh produce to respire and produce CO_2 , thereby greatly reducing the risk of CO_2 damage to valuable fresh cargoes.

For a more detailed description of Daikin's CA technology, please see our Autumn 2013 newsletter at www.daikinreefer.com/news-room



Fruit will stay fresher for longer as Daikin further develops its Controlled Atmosphere system to reduce O_2 density during storage.

Introducing the CA system development team

Our project team is made up of engineers, developers and designers who are experienced in both refrigeration and air conditioning. The team's diverse range of skills and experience ensures that Daikin's new CA system will be an outstanding product incorporating our most advanced thinking.



Group Leader, Kazuhide Mizutani

Kazuhide Mizutani has worked at Daikin for 23 years, gaining experience as a design and technical developer in both the air conditioning and refrigeration fields. He joined the Daikin reefer team four years ago. Among other responsibilities, Kazuhide will lend his experience in air conditioning technology to the development of the CA system for reefer units. Air conditioning is one of

Daikin's leading products, providing outstanding technology solutions not only for air cooling and heating, but also for air purifying,

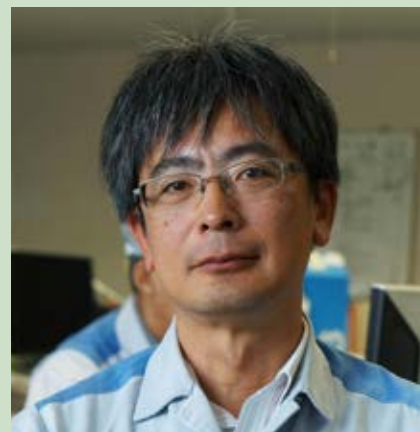
"As the leader of the CA development project, my role will be creatively adapt Daikin's technologies, especially air-conditioning and air-purifying, to produce a safe and highly reliable products for use in refrigerated container systems."

Senior Engineer, Shigeto Tanaka

Shigeto Tanaka has been involved with Daikin's reefer division for over 25 years and is the most specialized and senior reefer engineer on the CA system development team. Shigeto is the inventor of Daikin's unique hot gas defrost system. He was also involved in the design of DTMS, Daikin's Temperate Management System for reefer containers, as well as development of the Daikin reefer controller and refrigerant

control system. He brings in-depth understanding of every aspect of Daikin's reefer machine technology to the CA development project.

"The most important attributes for a reefer machine are reliability, high performance and low power consumption. I'll be incorporating these fundamental concepts into our CA system development to ensure that they are always maintained and never compromised."



Kazuma Yokohara

Kazuma Yokohara has worked with Daikin for over ten years, developing inverter systems,

controllers and other reefer container technologies, with particular focus on user-friendliness and ease of maintenance. As part of the CA system project team, he'll be focussing on adapting Daikin's sophisticated oxygen-enriched technology, currently deployed in the medical field, for its first use in the reefer sector.

Daikin's medical oxygen conserving devices are used in home oxygen therapy (HOT) to provide small amounts of oxygen to chronic respiratory disease patients, giving

them the freedom to take part in outdoor activities. The technology involves extracting nitrogen and enriching oxygen from the air stream. For CA in reefer containers, this process will be reversed, enriching the nitrogen stream and extracting oxygen to extend the lifespan of valuable fresh produce.

"My goal is to help Daikin develop a high performance and highly reliable CA system adapting our proven technology from the medical field."



Customer focus

Daikin passes the 200 customer mark

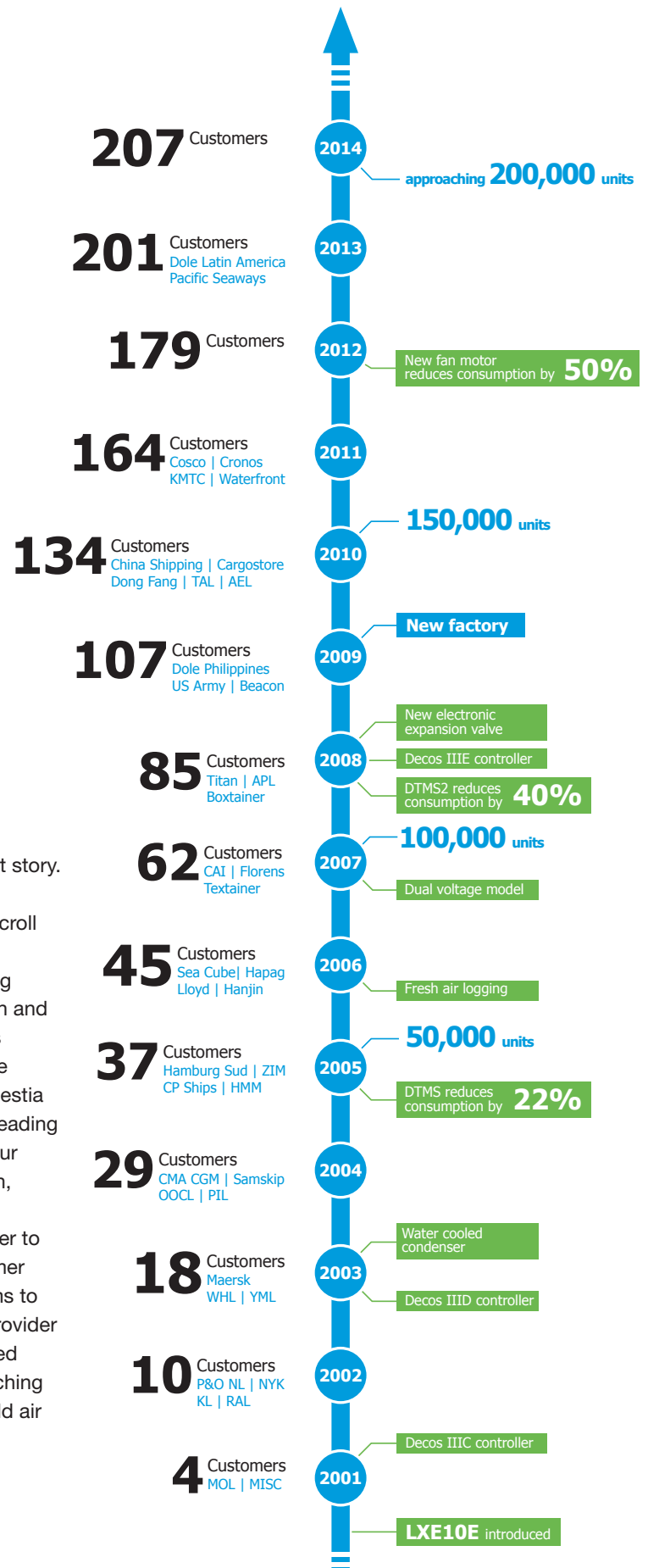
Thank you to all of our clients in Japan, Asia, Europe and the Americas for helping Daikin reach another important milestone in the refrigerated container market

As of February 2014, we are delighted to announce that Daikin Reefer's customer base has reached 202 companies worldwide. Daikin's global client base now includes both major European and US headquartered ocean carriers and leasing companies, plus a strong and growing list of Japanese and Asian carriers operating both in intra-regional and international markets.

Our 200th customer is Dole Tropical Products Latin America Ltda, which recently made its first purchase of Zestia units for the company's fresh fruit export operations from Costa Rica. You can find

more details in the next story.

Daikin continues to enhance the LXE10E scroll compressor machine with a focus on meeting customers' expectation and further extending sales worldwide. At the same time, our DC inverter Zestia machine offers world-leading energy savings. With our sales, technical, design, after-sales and quality control working together to deliver the best customer satisfaction, Daikin aims to become the premier provider to the global refrigerated container market, matching our position in the world air conditioning sector.



Customer focus



Dole Tropical Products Latin America become Daikin's customer number 200

Dole Tropical Products Latin America Ltda has decided to add to its fleet of reefer equipment the Zestia Daikin model.

"In 2013 we had a Zestia model on trial for more than six months and during that time we ran several tests with the unit that showed the reliability, efficiency and low power consumption of the Zestia model," says Mr Marcio Rivera (Dole Container M&R Senior Manager for LA).

Also, Ms Karina Rodriguez (Dole Equipment Manager) says that "we are confident that the quality of Daikin

equipment will allow us to improve our operations and reduce our M&R costs."

Both Karina and Marcio had visited DRS, Daikin factory located in the city of Suzhou in China at the beginning of December 2013. During their visit to our factory they had the chance to observe the manufacturing process of our units and exchange views and ideas with the management of Daikin.

The Zestia units are due to arrive in Costa Rica in April 2014 and they will be put into service immediately.

About Dole Food Company Inc

Dole Food Company Inc, with 2012 revenues from continuing operations of \$4.2 billion, is one of the world's largest producers and marketers of high-quality fresh fruit and fresh vegetables. Dole is an industry leader in many of the products it sells, as well as in nutrition education and research. For more information, please visit www.dole.com or <http://investors.dole.com>



Dole's new Zestia units awaiting delivery to Costa Rica for April 2014.



Customer focus

ConGlobal acquires LXE units

Headquartered in San Ramon, CA, ConGlobal Industries Inc (CGI) is North America's largest full-service supplier to the intermodal industry, providing equipment repair, maintenance, storage and redistribution services to global container shipping and leasing companies through its network of 23 depots across the USA, Mexico and Costa Rica.

CGI is also one of the world's largest refrigerated equipment M&R companies, managing over 45,000 pre-trip inspections, 28,000 refrigerated repairs and US\$3.6

million in refrigerated parts sales annually through 16 depot locations in North America and Costa Rica. In addition to its M&R services, CGI is an active player in the sale of standard and modified containers, both new and second-hand, including refrigerated container equipment. In December 2013, the company made its first purchase of several Daikin LXE10E machines, which will be supplied to customers in the North American oil industry.

"We have noted that Daikin has been expanding its activities both in South and North America and

that the Daikin brand and products are becoming more recognized," said René Etcharren, Senior Vice President at CGI. "We believe that the Daikin LXE10E will bring benefits to our customers in terms of reliability, power savings and quality and are pleased to add this technology to our portfolio."

For more information on ConGlobal Industries visit www.cgini.com

Leading North America refrigerated equipment service provider ConGlobal Industries has made its first purchase of LXE10E units.





Customer focus

Yanmar buys Zestia units

Leading Japanese agricultural plant supplier Yanmar Green Systems purchases Zestia units to provide low-power transport for locally-traded produce in the Okinawa region

Founded back in 1912 as Yamaoka Hatsudoki Kosakusho, a producer of gas engines, today Yanmar Co Ltd is a global force in the production of agricultural machinery, marine and industrial engines and construction equipment. Group company Yanmar Green Systems Co Ltd, based at Yanmar's corporate HQ in Osaka, has recently purchased a number of Zestia units to meet the challenge of local seaborne transport for Japanese agricultural co-operatives based on Yoronjima and surrounding small islands.

The small island of Yoronjima is located approximately 22km north of Hedo Point, the northernmost point of Okinawa Island. Okinawa Island itself is the fifth largest in Japan, and is surrounded by hundreds of islands stretched out in a chain over 1,000km to make up Japan's most southerly prefecture. Yoronjima is one of the Amami islands.

With its humid, subtropical climate, Yoronjima is a centre for agriculture. Its main crops include taro and sweet potatoes, sugar cane and flowers. Fresh produce grown in Yoronjima reaches consumers across the many remote islands of Okinawa prefecture and the main island of Japan

(Honshu) by sea, transported south on small inter-island vessels.

The operational challenges include low and erratic power supply in many of the islands to which produce is shipped, and the need for compact transport units. Yanmar Green Systems, which specializes in the design, construction and after-sales service of agricultural equipment, has now purchased a 12ft refrigerated container fitted with the Zestia unit to meet the unique and demanding needs of this market.

The Zestia design was selected for its low power requirements and energy consumption both at start-up and in transit, as well as for its high operational reliability and low maintenance needs. Zestia machines can start up with just one-quarter of the electrical current that would normally be required by a marine container refrigeration unit.

Daikin also developed special software for low air volume operations, reducing the normal airflow capacity to avoid produce damage and dehydration in the smaller 12ft container space.

Other Zestia features improving ease of use in the field include the at-a-glance temperature display in a large liquid crystal panel at the front of the controller and the ability to download data and upload software via USB memory stick.

Yanmar chose Zestia for its low power requirements and energy consumption at both start-up and in transit.





Resale market

Developing Russia's reefer service and resale market

A fourth dealership contract and the launch of a Russian language reefer service manual are two of Daikin's latest developments in this important market

In the last issue of °C, we reported Daikin's increased focus on the fast-growing Russian market, including recent technical seminars staged in Moscow, St Petersburg and Vladivostok. Russia is a strategic development market for Daikin Reefer, due not only to the steady increase in its international refrigerated container import trade, but also to the demand for second-hand reefer equipment within the country itself.

The market for resale units in Russia and the CIS countries is strong and growing, both for inland transport and static use. Second-hand Daikin units already supplied to customers in the region are frequently used for cold storage operations.

Smaller domestic operators and specialist equipment resellers play a major role in Russia's reefer transport and storage chain. These companies look for a good quality-to-price ratio and Daikin is now working hard to improve awareness of its LXE10E units as a competitive option in the resale market.

To serve our international and domestic clients in Russia, Daikin is continuing to build up its after-sales network with the aim of ensuring consistent spare parts supply and

support in all the main areas. As of December 2013, we are pleased to welcome Refterminal as our fourth dealer in Russia, joining our existing dealers RefTechService (www.reftechservice.com).

In order to better support local reefer service engineers, the technical manual for the LXE10E has been translated into Russian

spbreefer.com), Vladreftrans (www.vladreftrans.ru) and Transtek (www.transtec.ru). Headquartered in Vladivostok and with sites in Moscow and Khabarovsk, Refterminal was established in 2001. Today, the company provides a wide variety of reefer services to local, national and international clients, including freight forwarding, transport, M&R and equipment sales and rental. For more information, visit www.rftu.ru

During the course of our technical seminars in Russia, Daikin also recognized the need to provide Russian-language support for local reefer service engineers. The Technical Manual for the LXE10E has accordingly been translated into Russian.

Service update

Truck transport provides swifter service for Brazil

Successful trials with road transport have slashed lead times for delivery of spare parts into Brazil from Daikin's spare parts distribution centre in Uruguay

Since opening its own spare parts distribution centre in Montevideo, Uruguay, Daikin has continued to explore new procedures and processes to provide better service for customers across South America. Most recently, the focus has been on Brazil, one of the continent's most important reefer trade markets, with year-round business in the export of meat, fruit and processed foods.

"Brazil has a number of important ports for reefer business, such as Santos and Itajai, where our valued ocean carrier customers call regularly," says Alvaro Quintana, After Sales Service Manager for the Americas region. "Fast delivery of spare parts to our authorized repairers in Brazil is vital to ensure that these clients are well served."

Until recently, spare parts have been shipped by sea, leaving from the Port of Montevideo and arriving via the Port of Santos. While the sea leg of this journey is just four days, the total delivery cycle can take up to four weeks.

Alvaro Quintana explains, "Customs clearance in the Port of Santos takes up to three weeks and there are often some additional days waiting for shipments to be loaded in the port of Montevideo."

In a bid to reduce the lead time, Daikin Americas Reefer Parts Operations Centre decided to try truck delivery.

"The trials demonstrated that we can deliver spare parts in just five days door-to-door when we go by road"

Two trial shipments were carried out with Termobrastec Comercio e Servicos Ltda, one of Daikin's authorized service dealers in Brazil. The results were outstanding. "The trials demonstrated that we can deliver spare parts by road in just five days door-to-door," says Lisa Wiedeman, Operations Coordinator at the Daikin Americas Reefer Parts Operations Centre. "This means we can reduce the total lead time from Montevideo to Brazil by 82% compared with ocean shipment. Smooth customs clearance on the border is the key. We've got the know-how to manage this with perfect preparation of import documents and close communication with our clients and trucking company."

Shin Kimura, Operation Director of MOL (Brasil) Ltda, the Brazilian arm of Japanese container carrier MOL Liner, says, "The five-day delivery via truck will change the situation dramatically and help our operations very much. We hope that Daikin will cooperate closely with the repairers in Brazil and make the new delivery method standard."



"The five-day delivery via truck will help our operations very much." Shin Kimura, Operation Director, MOL (Brasil) Ltda.



Service update

Boosting reefer repair knowledge in Asia and Australasia

Daikin's authorized repairers in the Asia region came together for a technical meeting at Daikin Refrigeration Suzhou Co Ltd (DRS) in China last June. The meeting focused on reinforcing technical knowledge of Daikin's Zestia and LXE machines, to enable Daikin's authorized repairers to carry out smooth and efficient repair work. From China, Taiwan and Hong Kong, 34 people from 30 companies joined the two-day meeting, with a further 20 people representing 16 companies in Australia and New Zealand. The meeting, which included a tour of the DRS factory, generated a lot of positive feedback which we are pleased to share with you here.

"We were very impressed by visiting the DRS factory, including the production lines from parts to whole units, standardized production

procedures, quality assurance system at each production step and training of employees, which increases our confidence in the products' quality."
Company A in Shanghai

"I was impressed with the work environment, safety education and very strict systems in place at the Daikin facility, with standardized management truly implemented."
Company B in Shanghai

"Everything in DRS is in good order and the scientific management is worthy of learning."
Company C in Shanghai

"Factory clean and tidy, Attention paid to environmental protection. Precise production process and perfect production management system."
Company A in ShenZhen

"The unit production workshop is very big, and each production process has a strict quality control. Furthermore, DRS is equipped with a specialized staff training site, and great attention is paid to safety during production."
Company A in Xiamen

"DRS is a large and very shipshape company, with friendly staff and everything in good order. Each procedure is strictly managed."
Company A in Qingdao

"It is an orderly, clean and modern factory."
Company B in Qingdao

"The workshops are clean and tidy, all things are put in order, and work processes are sound."
Company C in Qingdao



Daikin news

Daikin MR Engineering exhibits at MARINTEC CHINA 2013

Daikin MR Engineering Co Ltd, a 100% wholly-owned subsidiary of Daikin Industries, specializing in marine air conditioning and refrigeration systems, participated in MARINTEC China, December 3-6 2013.

Held once every two years, MARINETEC China is the largest marine exhibition in Asia. The 2013 edition marked the 17th anniversary of this massive event with over 1,700

Key products include the Daikin Deck Unit, a central air-conditioning unit used in ships' accommodation

exhibitors and more than 55,000 visitors taking part in four days of activities.

For Daikin MR Engineering,

participation at MARINTEC was a chance to reinforce the company's commitment to ensuring that customers in the Chinese shipbuilding market receive the best in system design, equipment supply, commissioning and after-services support.

Key products supplied by Daikin MR Engineering include the Daikin Deck Unit, a central air-conditioning unit for ships' accommodation, with a space-saving, eco-friendly and simple-to-install design. The Deck Unit features a hermetic scroll compressor – one of Daikin's specialties – to deliver high air-conditioning efficiency with low maintenance in a lightweight configuration.

In order to better serve the needs of its customers in China, Daikin MR Engineering established a subsidiary, Daikin Marine (Shanghai) Co Ltd in 2009. Working together with Daikin

Marine (Shanghai), today the company continues to expand and improve the scope of its services in China to provide superior reliability and innovation in products and services.

<http://www.daikin.co.jp/group/dmre/english>
www.daikin-marine.com/en



The lightweight Deck Unit is low maintenance and delivers high air conditioning efficiency.

Upcoming events

Intermodal Asia



The Daikin team will be out in force at the first Intermodal Asia exhibition, taking place 1-3 April at the Shanghai World Expo Center. A sister event to the established Intermodal Europe exhibition, Intermodal Asia will welcome the global container logistics industry's leading names, ensuring that a wide range of products and services will be on show. If you plan on visiting, please drop by stand C01 to see us.

Daikin's show theme at Intermodal Asia, "Daikin, firm position in Asia", emphasizes our strong partnership with customers in Asia. Also, as we have the factory in China, we emphasize our commitment to energy and environmental efficiency in refrigerated container design, manufacture and operations.

Visitors to our stand will have chance to learn more about Daikin's new controlled atmosphere technology now under development, as well as to "touch and feel" the Zestia DC-inverter machine, with its world-leading low power consumption, and view the latest improvements to the LXE scroll compressor unit.

www.intermodal-asia.com

Intermodal South America



Daikin will also exhibit as usual at Intermodal South America this year. South America's leading event for container transport and logistics takes place as usual

in São Paulo, Brazil on 1-3 April, coinciding with the Intermodal Asia event.

Please stop by to meet us at Stand B120 at the Transamerica Expo Center for what promises to be yet another busy meeting for the Latin container logistics community.

www.intermodal.com.br



Daikin people

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"I joined the Daikin Reefer after-sales service team in April 2013, having worked as a Daikin employee for 29 years. I'm very excited to enhance our service activity in all regions. My past experience has included time spent as a design engineer, sales engineer, after-sales service and market researcher in Daikin's business units for semiconductor manufacturing and air-conditioning equipment. I'd like to develop new best practices for reefer after-sales service and believe that my various experiences will help to develop new solutions in this business. Let's enjoy the expanding reefer business with Daikin's technology and our global service network."



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"Hi, my name is Katsu. I joined Daikin Reefer in October 2013 as a member of the Sales Department, after achieving a BA in Communication Studies from California State University, Northridge last year. Daikin is my first workplace, and I am now busy learning the basics of the reefer business every day."



DAIKIN

