

## Titan challenge

Creating a fleet of cold storage containers using Daikin's refrigeration technology

## Active Control Atmosphere

How our new technology minimizes the aging process of food products during transit

## Daikin chosen by CMA CGM

World's third largest container shipping company buys 1,000 new reefer containers equipped with Daikin's LXE



**Chemical**  
Global refrigerant supplier



**Air conditioning**  
No.1 in the world



**ZESTIA**

**LXE10E**

R134a refrigerant

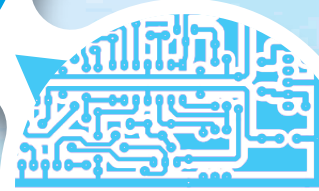
Scroll compressor & Temperature control

Hot gas defrost



**Reefer**  
40 Years experience

Electronic controller



**Electronics**  
Engineering expertise

## In-house knowhow

The importance of developing all our key technology in-house

## 90th anniversary

Daikin celebrates 90 years of perfect comfort in heating & cooling solutions

# Welcome

## From Katsuhiro Tetsuya, Director of Daikin Reefer Container Sales Division

**One of our strategic aims is to further grow Daikin's presence in the European market, so it's good timing and a great honour that we can announce an order from CMA-CGM for 1,000 units. This order should be our big breakthrough in expanding European sales, and our controlled atmosphere (CA) device will be perfect for this market.**

In order to accelerate our sales activities in Europe, we've intensified sales manpower with ITOCHU Metals Corporation. You can find the latest team members and feel the optimism in this edition of the newsletter (page 10).



Daikin foresees the unit trend moving towards features that ease daily operation and cut maintenance and repair costs. Shipping lines are very focused on working smarter and taking costs out of the system, and Daikin is part of this.

By the end of the year, we will have exhibited at three major industry exhibitions: Intermodal South America, Asia and Europe. Intermodal South America and Asia were held in Sao Paulo and Shanghai 1-3 April and we succeeded in introducing Daikin's new technology and representing our presence in these regions. Although it was our first time at Intermodal Asia, the Daikin brand was well recognized and the show more than exceeded our expectations. It was a great opportunity to meet over 500 people – both customers and dealers. I believe our high level of reliability and market share in the Asia region have contributed to the strength of our brand. I hope all the visitors to Intermodal Europe, 11-13 November, enjoy it likewise.

Furthermore, it is remarkable to say that this year is Daikin's 90th anniversary since its founder, Mr Akira Yamada, established the company by setting up the Osaka Kinzoku Kogyosho Limited Partnership in 1924. He started the company as a metal fabricator that produced aircraft radiator tubes. For the whole story, see page 3.

For our reefer business, it's been 49 years since Daikin's very first container reefer unit was installed in Japan. Since then, our business has grown gradually and globally, and now it's a representative business of Daikin in terms of cold chain industries.

We are sincerely grateful to you all for supporting Daikin from past to present. I hope that you will continue to have a good relationship with us and that we can go on helping your business from now and into the future. Please enjoy this issue of our newsletter.

**Katsuhiro Tetsuya**  
**Director**  
**Reefer Sales Division**



# Daikin news

## 90 Years of perfect comfort

Daikin celebrates 90 years of heating & cooling solutions

**D**aikin is celebrating 90 successful years of smart heating and cooling solutions this year. “Daikin makes people happy since 1924!” is the slogan for this very special anniversary.

Mr Akira Yamada established Daikin in 1924 by setting up the Osaka Kinzoku Kogyosho Limited Partnership, a metal fabricator that produced aircraft radiator tubes. The company soon began to specialize in industrial air conditioning systems. Since then, Daikin has grown and become the world’s number-one manufacturer of air conditioning systems and a leading provider of reefer containers and machinery.

At the heart of the company’s success is its singular focus on developing energy-efficient heating, cooling, ventilation, air conditioning and refrigeration solutions for residential, commercial and industrial applications. This specialization, combined with the company’s commitment to environmental responsibility, makes Daikin unique. Innovation, sustainability and energy efficiency take top priority, demonstrated by the development of products and systems that with each generation consume less energy and release less carbon dioxide into the atmosphere.

Daikin has been at the forefront of technical innovation since it began manufacturing cooling systems and refrigerators in the 1930s. It has launched a number of industry firsts, including the first heat pump air conditioner in 1958 and the first Variable Refrigerant Volume (VRV) system in 1982, which was able to supply conditioned air from multiple indoor units connected to a single outdoor unit.

Daikin continues to innovate, with the launch earlier this year of the VRV IV heat recovery system. This complete

*Daikin has been at the forefront of technical innovation since it began manufacturing cooling systems in the 1930s*

building solution is up to 28% more efficient than the previous generation of VRV, is more flexible and can be installed faster than any other heat recovery system.

The LXE series container refrigeration system has been on the market for over ten years and is recognized for its high level of reliability. Following the success, reliability and performance of the LXE series, Daikin launched

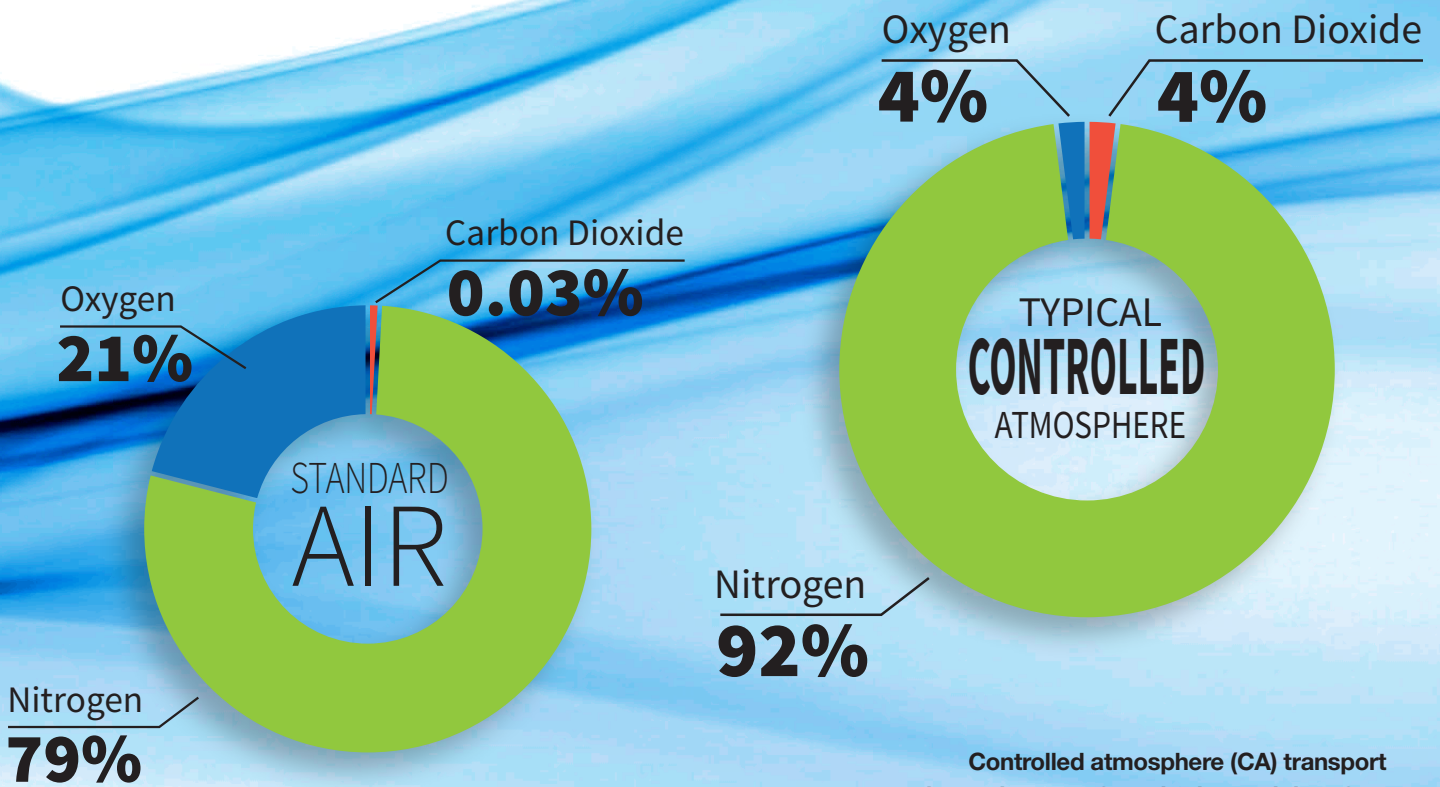
Zestia, a new premium unit particularly suited to international operators requiring the highest levels of cooling performance, temperature precision, easy maintenance and low energy consumption. Based on the successful LXE Series’ technology, the Zestia container refrigeration unit features a DC inverter compressor that enables further reductions in operating costs.

Daikin is the only manufacturer that designs and develops refrigerants, compressors, temperature control technologies and other key components of container refrigeration units completely in-house.

All Daikin products are backed with the brand’s renowned quality and reliability, plus 90 years’ experience of serving customers around the world. Daikin has a truly global presence, with sales operations in more than 130 countries and about 60 manufacturing facilities all around the world.

Daikin’s success over the past 90 years is a result of listening to our customers and delivering solutions that meet their changing needs. Whatever the future holds, Daikin will continue to develop energy-efficient solutions to improve comfort, reduce costs and lower environmental impact.

Here’s to another 90 successful years!



Controlled atmosphere (CA) transport reduces the rate of respiration and therefore minimizes the aging process that food products experience during transit.

# Daikin technologies

## Daikin Active Control Atmosphere

**F**resh fruits, vegetables and flowers continue to respire during transport, absorbing oxygen from the atmosphere and producing heat and CO<sub>2</sub>. This respiration process accelerates the maturity of fresh produce and shortens its storage life.

Controlled atmosphere (CA) transport reduces the rate of respiration and therefore minimizes the aging process that food products experience during transit.

To help to slow this respiration process, the reefer container's refrigeration machine controls the

air composition inside the container with a dramatic reduction in oxygen, as well as air temperature control.

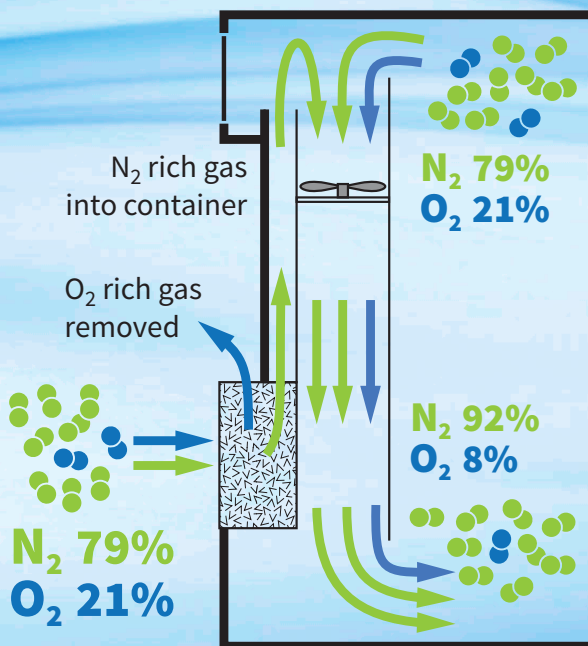
*Controlled atmosphere transport minimizes the aging process of food products during transit*

Standard air is composed of 79% nitrogen (N<sub>2</sub>), 21% oxygen (O<sub>2</sub>) and 0.03% carbon dioxide (CO<sub>2</sub>). In a typical CA, however, O<sub>2</sub> content is just 2%, CO<sub>2</sub> is 2% and N<sub>2</sub> is 96%. The lack of available O<sub>2</sub> reduces cargo

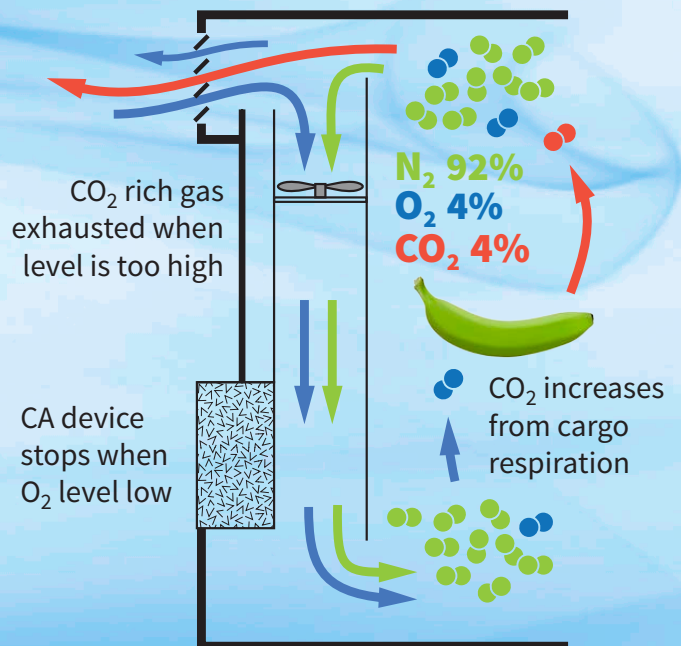
respiration and hence allows goods to arrive in better quality at the final destination. Fruit products also retain a higher natural sugar content.

Different kinds of CAs can be created that best suit particular kinds of produce. Mangoes, for example, are best transported in CAs of between 3% and 5% O<sub>2</sub>, and between 5% and 10% CO<sub>2</sub>. Avocado, however, are best kept in an atmosphere of between 2% and 5% O<sub>2</sub>, and between 3% and 10% CO<sub>2</sub>.

Daikin plans to begin production of its provision-type machine, which can be fitted with a CA device, in the



**1** VPSA system in CA device scrubs out O<sub>2</sub> to create a N<sub>2</sub> rich gas which is then pumped into the container.



**2** CA device stops when O<sub>2</sub> is at the correct concentration. When CO<sub>2</sub> level becomes too high, the gas is exhausted.

fourth quarter this year. A new Daikin CA device will be produced in the first quarter next year, which aims to extend the storage life of fresh produce during transit, as well as be reliable and economical.

Daikin's active CA system is compact but maintains a high level of performance. The machine creates a large quantity of N<sub>2</sub> gas, which is supplied into the container by a Vacuum Pressure Swing Absorption (VPSA) system. The VPSA system uses the mineral adsorbent Zeolite, which can quickly capture a large quantity of N<sub>2</sub> from the air and charge

the gas into the container. This allows the O<sub>2</sub> level to be quickly reduced without adding additional gas.

*Daikin has been at the forefront of technical innovation since it began manufacturing cooling systems in the 1930s*

The Daikin system uses cargo respiration to maintain the container's CO<sub>2</sub> level, alongside an automatic ventilation control, which is simple

and economical to run (see diagram).

The CA devices are easily installed on the provision machine. The design of the main CA devices, the oxygen-conserving LiteTEC-5X component, was adapted from Daikin's oxygen concentrator, which was developed for medical use and therefore required the highest level of reliability.

Because CA transport is able to delay food cargo from spoiling, this extends the storage time of produce, and enables it to be carried on longer voyages. It also allows a broader range of fresh cargoes to be carried.



# Customer focus

## CMA CGM

The world's third biggest container shipping company, CMA CGM, has bought 7,000 new reefer containers, and 1,000 of them are equipped with Daikin's ultra-reliable LXE10E.

**In what would seem a timely fashion, the CMA CGM Group acquired 7,000 new 40-foot high-cube reefer containers just prior to the announcement of its Ocean Three alliance agreement with China Shipping (CSCL) and United Arab Shipping (UASC). A thousand of these new reefers are equipped with new Daikin LXE10E model machines.**

CMA CGM, the world's third-largest container shipping company, says that the Ocean Three agreement will "combine both speed and reliability". The focus on reliability has also played a key part in the decision in favour of the new Daikin low-consumption machines.

"With the latest hard- and software improvements, these machines will provide us with energy efficiency, reliability and cost effectiveness," explains Alexis Michel, CMA CGM's Senior Vice-President Logistics, Intermodal and Reefer. "We are always looking at new container innovations and are constantly upgrading our 100,000-reefer container fleet with low-consumption machines."

Over the past 12 years, the LXE-10E has proven to be a real workhorse in the industry with fewer break-downs than the rest. Initially designed in an era where fuel costs were less of a concern, Daikin has improved the energy



performance over the years through hard- and software improvements, to such an extent that the latest ‘G’ model cuts energy consumption by more than 50% from the earliest models.

*Daikin hard- and software improvements over the years means that the latest “G” model of the LXE10E cuts energy consumption by more than 50% from the earliest models*

The unit’s proven reliability, coupled with the lowest spare parts prices in the market, may also be one reason why CMA CGM decided to supply LXE-10E for the French army recently. As part of the customer support, Daikin provides free on-demand technical training seminars, as well as familiarization (‘touch & feel’ or T&F in short) sessions for both tech and non-tech people throughout customer organizations.

“Daikin is very honoured to be back as a chosen supplier of CMA CGM, while they are Daikin’s regular second lease user,” says Katsuhiro Tetsuya, Director of the Reefer Container Division at Daikin. “Europe is a very important focus area for Daikin. This order proves that the hard work of optimizing product offerings pays off, in the same way that CMA CGM has renewed their product offering through the Ocean Three agreement.”

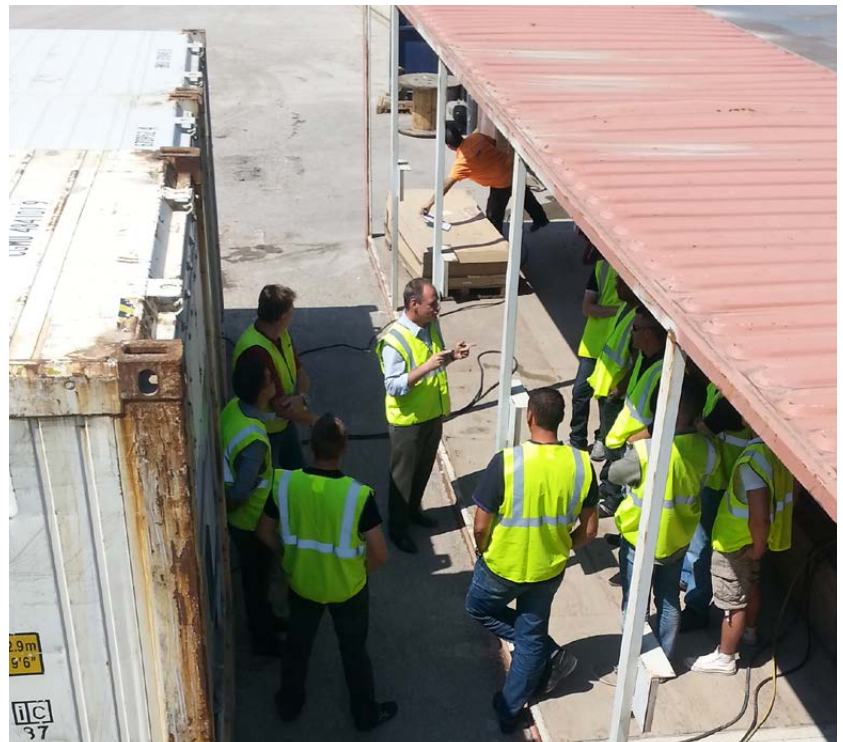
**About CMA CGM**

CMA CGM, founded and led by Jacques R Saadé, is the world’s third-largest container shipping company and posted turnover of \$15.9 billion in 2013.

Operating a fleet of 430 vessels, the Group serves more than 400 ports around the world. In 2013, the Group carried 11.4 million TEU (twenty-foot equivalent units).

With a presence on every continent and in 150 countries through its network of 650 agencies and branch offices, the Group employs more than 18,000 people worldwide, of which 2,400 are based at its headquarters in Marseille.

**Below left: Alexis Michel, CMA CGM’s Senior Vice-President of Logistics, Intermodal and Reefer**  
**Below right: Daikin training seminar for the French Army**



# Customer focus

## Titan Containers

**J**ust a few years ago, some sketches of a new concept in portable cold storage were made at a kitchen table. A year later, prototype trials were performed and those few bits of paper became reality.

The sketches became Titan Containers' ArcticSuperstores product line. The ArcticSuperstore is a brand-new concept that uses factory-constructed container-size modules that are easily built together on site to form a single-zone cold store – a portable refrigerated warehouse that can be built to a variety of sizes. The smallest 40-foot model SuperStore2 is four pallets wide and has a capacity of 42 UK pallets – 13% more than the biggest three-pallet-wide

units and with much lower costs from delivery to daily use. Twenty-foot SuperStores are also available.

As an existing supplier of the LXE refrigeration machine, Titan Containers involved Daikin at the concept stage. Although the proposed application was radically different to standard applications, Daikin allocated top engineers to test the proposal from concept through design and to prototype testing. As part of the after-sales service, Daikin engineers recently visited several customer sites to check the performance of the SuperStores. This is just one example of the Titan-Daikin partnership relationship working to the benefit of both companies and their customers.

**Titan Containers' ArcticSuperstore is a portable refrigerated warehouse that can be built to a variety of sizes.**







Three years after the kitchen table sketches, Arctic SuperStores are supplying reliable power and cost-effective cold storage in 12 countries and for a wide range of fresh

### *Daikin allocated top engineers to test the proposal from concept through design to prototype testing*

and frozen agricultural products, prepared and semi-prepared ready meals, pharmaceuticals, chemicals – and even aircraft component materials.

At about the same time, Titan challenged Daikin with the concept of using the LXE machinery in 10-foot containers for use by the offshore industry. At this point, Titan had many years' experience using standard marine refrigeration in 10-foot containers but Daikin had none. The company rose to the challenge, and since then many hundreds of Daikin machines have been installed and are

successfully operating in Titan's sizeable fleet of 10-foot DNV reefers and ArcticStore cold storage units. Many of these containers are in daily use from a hub many miles from traditional marine refrigeration service centres. Daikin helped facilitate local training and education seminars to ensure a good level of basic knowledge and expertise among the end users.

Titan has time and time again shown its entrepreneurial talents to use standard maritime products and skills to create alternative products perfectly suited to the diverse and demanding non-maritime container markets. Daikin have similarly proven themselves as reliable partners where Titan's innovations include refrigeration.

"I am always 100% confident when working on projects with Daikin. Whilst it might take time to convince them the application will work, the technical support is always thorough and beneficial," says Layland Barker, Managing Director of Titan Containers.

## Customer focus

### COSCO

**C**OSCO container lines is one of the largest shipping lines in China and one of the world's top ten container carriers.

Connecting more than 162 principal ports in over 49 countries and regions across the world, the company operates over 84 international shipping routes, 23 international feeder routes, 23 coastal routes in China and 79 routes in the Zhu Jiang Delta and the Chang Jiang River. With an annual carrying amount of 8,016,241 TEU in 2013, 16% higher than the previous year, COSCO's carrying capacity ranks highly on a global scale.

COSCO has woven a huge global service network, which consists of more than 400 sales and service points. In mainland China, COSCO boasts service coverage of 300 sales and service points. On top of China and Asia, COSCO

plies its route between vital ports in Europe, America, Africa and Australia. Under the pressure of intense market competition, COSCO has built up excellent sea routes, such as Sino-Australia and its northwestern Europe string, plus brand-name services such as the One-Stop Service and the HDS Service. The company applies the latest international service ideas and methods in order to improve service quality.

COSCO is one of Daikin's largest established customers, and has used the Daikin LXE scroll compressor model container refrigeration machine since 2011. This year, Daikin is honoured to have received a repeat order from COSCO. Daikin has delivered close to 6,000 units to COSCO.

Daikin will continue to develop machine to meet with COSCO's satisfaction.



From left to right: Pratima Mahabier, Ronald van Andel, Harm Louwen, Richard Boshuijjer and Arjan Bezemer

# Daikin people

## European team members

Daikin is an international company that aims to keep its customer service local and accessible. Our European team has gone from strength to strength since the opening of our Rotterdam office in 2001.

**D**aikin's relationship with its European customers has been close ever since the opening of the Daikin Reefer office in Rotterdam in 2001. Early results arrived in 2002, with the win of a large order from P&O Nedlloyd, marking the successful start of an increased customer base in Europe and the Middle East.

In 2008, Daikin Reefer moved together with Daikin A/C into new offices in Capelle aan den IJssel, where the Daikin Refrigeration Office was established. The office is very close to the Port of Rotterdam, one of the largest ports in the world, with easy access to other main European ports. This makes it possible to visit service dealers frequently.

Recognizing the cultural differences of Asia and Europe, Daikin's Refrigeration Office consists solely of local experts from the industry. We have a full Sales, Service and Engineering team, who listen to customers' requests and take action with the support of Daikin's technical team in Osaka, Japan.

### Introduction to the European Reefer Team

The Daikin Refrigeration Office is the center of all sales, service and engineering activities for the Europe, Middle East and Africa (EMEA) region. Headed by General Manager Arjan Bezemer, this team is a key meeting point between customers and Daikin's headquarters in Japan.

### Arjan Bezemer

is the General Manager of Daikin's Refrigeration Office as well as Sales Manager for the EMEA area. With 20 years of refrigeration experience overall, Arjan has been in the reefer business for 16 years, of which he has spent 12 years working for Daikin.





Arjan started as a reefer mechanic at service provider Smith Holland and then became a project engineer, working on new-built CO<sub>2</sub> recovery plants globally, including big refrigeration systems. Arjan rejoined the reefer business in 2002, when Daikin opened the Rotterdam office, where he started as Service Manager, establishing the service network within EMEA. He moved on to become Sales and General Manager in 2010.

“The reefer container industry has always attracted me. Especially during the few years I was out of the reefer industry, I realized the specialized industry we are in,” says Arjan. “Being part of the supply chain, where people can enjoy the many types of products all year around, gives a great responsibility and cargo awareness.

“Daikin manufactures a great product range of reefer machinery, which takes care of our customers’ cargo, before being delivered to the consumers,” he continues. “It is our commitment to listen to our customers’ needs and manufacture the best machinery, protecting the cargo and making sure that our customers are serviced anywhere globally anytime, all year around.

“I have a personal interest in aircraft aerodynamics and technology, which makes my job even more interesting as I spend much time flying around the globe visiting our customers. When on the ground, I enjoy spending time with my family and share their love for equestrian sports, as well as cycling and golfing.”



The European Sales team is supported by **Henrik Hansen**, the European sales agent of ITOCHU for Daikin Reefer. Henrik is located in Copenhagen, Denmark, and has 28 years’ experience in the container industry, of which 14 years have been in the reefer business. With his

experience of container boxes as well as reefer machinery, Henrik has the expertise to support our customers to the fullest extent.

“My policy is integrity and loyalty,” Henrik says. “We are in business together with our vendors and our customers. Therefore, we have to be able to rely on each other, and be able to treat each other with respect, even during hard negotiations. I believe very much that ‘a word is my word’ and will do what I can to deliver mine.

“I have a strong personal interest for cycling, road racing as well as mountain biking. I’m a youth trainer of a young cycling group, which possibly includes future Tour de France winners,” Henrik says. “Further, I enjoy playing a round of golf and am a volunteer at the Cancer Society in Denmark.”

Daikin’s Refrigeration office also includes a Technical Engineering department. To assist with our customers’ technical needs, **Harm Louwen** joined Daikin in 2012 as Technical Sales Engineer. With over 25 years of experience in the reefer industry, Harm has the expertise to advise on our customers’ technical needs.



“The excitement of being a Technical Sales Engineer is to find solutions for technical challenges our customers are facing,” Harm says. “Smaller or bigger customers, there is basically no difference in how we want to cooperate. This is how we will make the difference and I think why customers like to work with Daikin.

“During my free time, I enjoy spending time and relaxing with my family as well as cycling in different regions of Europe.”

On the Service side, two Regional Service Managers look after Daikin Service for the EMEA region.

**Richard Boshuijer** joined Daikin in 2005 as Service Engineer for EMEA and is currently the Regional Service Manager for the Middle East and Africa, as well as Russia, UK and Italy. He has 18 years of experience in the industry, having started



his career as a reefer mechanic. His knowledge of reefer machinery helps to train service technicians on Daikin’s LXE & ZeSTIA machinery within his region.

“I have daily contact with service dealers within my region for 24/7 technical support, and visit them regularly to keep their technicians updated, as well as checking the performance of the machinery performance during daily

operation,” Richard explains. “If technical failures exceed Daikin’s standards, we inform our quality control team in Japan for further action.

“Training seminars are an important parts of my work, making sure that our dealers are able to service the machinery correctly,” he says. “Together with our sales managers, I visit customers to perform so-called ‘Touch & Feel’ sessions to familiarize our customers with the Daikin reefer machinery.

“Personally I enjoy being out with friends, and on the sports side, I like playing soccer, cycling and sailing.”

The other expert in our Service team is **Ronald van Andel**, who boasts 28 years’ experience in the reefer industry. Ronald started in 1986 as Reefer Mechanic and later Supervisor at service provider Smith Holland. In 2007, Ronald joined Daikin as Regional Service Manager for the European region.



“My policy is to give the best service to all our customers. I’m in daily contact with our main parts center, located at Daikin Europe in Belgium, to make sure that the spare parts supply is according Daikin’s high standards,” Ronald says. “Further, 24/7 support, training seminars and service dealer evaluations are part of my job, making sure that our customers’ reefers can be used without unnecessary down-time at depots or terminals. I strongly believe customer satisfaction is the key to success.

“When I’m not at work, I enjoy watching and playing soccer and am coaching a junior soccer team as well.”

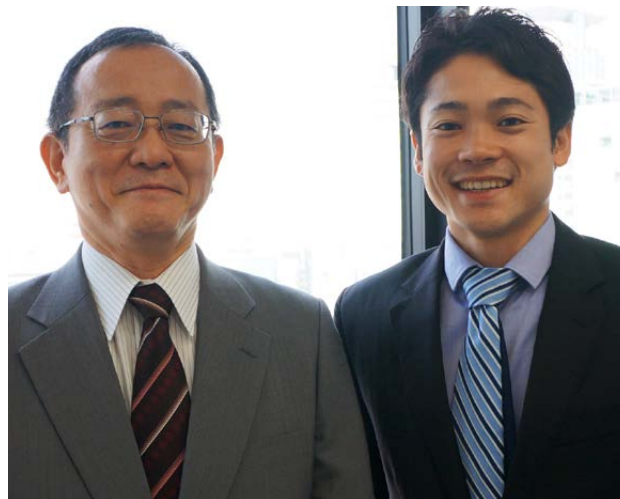
This technical-oriented team has been supported with the recent addition of **Pratima Mahabier**. Pratima supports the Sales and Service team in their activities, and provides direct customer support on vessel parts supply and claim registration.



Since she joined the reefer team in May 2014, Pratima’s main task has been making arrangements for the Intermodal Europe exhibition, which will be held in Rotterdam in November.

“I like watching movies during my free time and enjoy being with my family and friends. I’m looking forward seeing our customers and service providers at the Intermodal Europe exhibition, which will be held from the 11th to the 13th of November 2014,” Pratima says.

Daikin’s headquarters are located in Osaka, Japan. **Takao Hashimoto** (left) and **Katsunori Kudou** (right) are working in the office. They receive customer requests through the Rotterdam Office and organize the smooth delivery of machines to customers. The Osaka office not only organizes modification and delivery schedules, but also supports the Rotterdam office in developing new machines.



Takao Hashimoto has worked for Daikin for 28 years. He worked for many years in the air conditioning division as Daikin developed into the world’s leading company in this field. After having been Regional Manager in China and Korea, Daikin’s Refrigeration Division invited Takao to develop more customer satisfaction in the reefer sector.

Katsunori Kudou started his career at Daikin in 2013. He receives orders from the Rotterdam Office and organizes the modification and delivery process. It is often thought that Japanese people do not speak English well. Katsunori has lived in the US and speaks good English, so his presence helps make communication with the Rotterdam office more effective. Katsunori helps to share the Rotterdam Office’s latest developed ideas with the Japanese team.



# T&F seminars report

## 'Touch & Feel' (T&F) sessions to promote machinery resale

**D**aikin actively promotes its machinery to the resale market in order to support our customers during the second life of a reefer container. For this purpose, Daikin organizes so-called 'Touch & Feel' (T&F) sessions, where participants are able to experience the machinery close up, and ask questions relevant to its secondhand use. T&F sessions are held worldwide, usually to a very positive reception.

### **Daikin hosts a T&F Seminar in Xiamen**

A T&F seminar for the resale market was held in Xiamen, China, in June, supported by Greating Fortune (Xiamen) Container Service Co Ltd. A total of 29 customers from 18 companies attended, representing leasing companies, trading companies and local dealers.

The session included a presentation, followed by a technical demonstration and an introduction to the actual machine in the field. The commercial presentation was delivered by China Region Sales Manager, Simon Li (Li

Bing), and the technical presentations and demonstration were given by Mike Ma, China Region Service Manager.

*Daikin actively promotes its machinery to the resale market. We organize 'touch and feel' sessions, where participants are able to experience the machinery close up*

Xiamen is a major and growing market for reefer containers, to support both its agriculture export and marine product industries, which include aquaculture and fisheries. After the session, attendees told us that the "T&F session was interesting and informative".

### **Russia: St Petersburg, Moscow and Vladivostok**

This year, Daikin has conducted ten practical T&F seminars across Russia. Three events were held in St Petersburg at the RefTechService depot. Moscow also hosted three

seminars at its Referterminal depot, and four T&F seminars were held in Vladivostok (two at the Referterminal and two at the Vladreftrans depots).

Daikin used its Russian T&F seminars to share information about rebuilding spare parts. In Moscow, the seminar discussion looked at how to improve spare parts availability in the city. Referterminal has just started supplying Daikin spare parts to Moscow and there is no need to continue swapping parts, which left customers satisfied. The seminars delivered an update on the current market situation in Russia and allowed service dealers, new and existing customers to familiarize themselves with Daikin

*Customers say that the visits show that Daikin is taking the Russian market seriously. We plan to continue holding seminars at least once a year in the three cities*

Reefer units. Customers say that the visits show that Daikin is taking the Russian market seriously. Daikin plans to continue holding seminars at least once a year in each city.

**USA: Oakland**

In July, a T&F Seminar was held in Oakland, USA, with attendance from 13 customers from six different companies.

The half-day session included technical presentations and a demonstration from Steven Fedor, North America Region Service Manager; and a commercial presentation by Mike Shipley, ITOCHU North America Region Sales Manager. We received feedback from attendees that authorized repairs are necessary for end users in inland areas. Daikin continues to seek the solution for this.

**Vietnam: Ho Chi Minh**

Vietnam's first T&F seminar was held in Ho Chi Minh this September at the Rex Hotel. Twenty-two customers from 15 different companies took part. The session included a welcome lunch; presentations on the Daikin company and its machinery; market updates, and detailed technical functions. All attendees said they found the T&F seminar interesting and informative. Several customers were even motivated to purchase Daikin resale machinery after the session.



**T&F seminar in Oakland USA in July this year. The event was well attended, by 13 customers from 6 companies.**



**T&F seminar in Xiamen, China in June this year. The event was well attended, by 29 customers from 18 companies.**



# Service update

## Technical meetings keep authorized repairers up to date

**D**aikin held a technical meeting for its authorized repairers in the Asia region in May, and another in June for its colleagues in the North and South America region.

In total, 91 people from 51 authorized repairers attended the Asia meeting, which was held at the Daikin Rinkai factory in Osaka, Japan, on the 19th and 20th of May.

The American meeting also had a good turnout: 21 representatives from 13 authorized repairers in North America and 15 people from 11 companies in South America attended

the meeting in Miami, USA, from the 10th to 12th of June. The meeting was supported by RAVA Group.

The main focus of these meetings was to enhance repairers' understanding of Daikin's machines. The program included a general introduction to the Daikin company, as well as to its container business and vision. This was followed by a factory tour, technical updates and Q&A session to help our authorized repairers understand Daikin's technology and reliability.

A technical meeting for Daikin's

authorized repairers in Europe, Middle East, Africa, and Russia was held at Daikin's refrigeration factory in Suzhou, China, on the 17th and 18th of September. In total, 26 people attended, of whom 16 are authorized repairers. The meeting included a tour of the reefer machine and compressor production lines. Through the factory tour, attendees were able to see the high quality of Daikin's technologies.

# Market update

## Refrigerant update

**T**he EU committee has submitted its phase-down program, which shows the reduction plan of hydrofluorocarbon (HFC) refrigerants placed on the market from 2015 onwards.

This phase-down program is calculated in terms of carbon dioxide (CO<sub>2</sub>) equivalent (CO<sub>2</sub> equivalent = Global Warming Potential (GWP) x amount of refrigerant used). This means that in order to reduce the volume of CO<sub>2</sub> equivalent produced, it is important to reduce the amount of refrigerant charged in the reefer machine.

The European Parliament voted on March 11th this year on new EU regulations on fluorinated gases (F-gases), and the resolution will make some far-reaching changes on the

refrigerant market for reefer containers.

HFCs with a GWP of 2500 or more (excluding those stored below -50°C) will be prohibited as of January 1st, 2020, for stationary refrigeration equipment that contains or relies on these refrigerants.

Japan has drawn up its own new F-Gas regulation. From 2025, as a target, GWP of refrigerant used in stationary refrigeration machinery must be below 1500.

Refrigerant	GWP
R404A	3922
R134a	1430

## Upcoming event: Intermodal Europe 2014



Daikin will exhibit again at Intermodal Europe, taking place on the 11th to 13th of November at the Rotterdam Ahoy. At our stand you will find our latest CA machine update with the CA-installed reefer container unit, and you can meet our European team

members. We are looking forward to seeing many of our customers and business partners at Intermodal Europe this November at Daikin's stand (D40).

## Event report: Intermodal Asia 2014



集装箱多式联运亚洲展  
1-3 APRIL 2014 | SHANGHAI | CHINA

This year Daikin exhibited for the first time at the Intermodal Asia event, which took place at Shanghai World Expo Exhibition & Convention Center (SWEECC) on 1st to the 3rd of April. Around 6,000 attendees attended the show, and people visited the Daikin booth from around 200 companies.

Our theme at the show was 'Daikin: firm position Asia'. As a home-ground region, we have emphasized our strong partnership with customers. We had a very fruitful meeting with our potential shipping line and leasing companies. Overall, the show was a success.

We also had our Daikin Refrigeration Suzhou (DRS) factory tour during this period. Most of the customers who attended this factory tour said that they are fully satisfied and were very interested in the tour.

Daikin once again will exhibit the Intermodal Asia 2015, which will be held in Shanghai on 24th to 26th of March next year.

## Event report: Intermodal South America 2014



Daikin exhibited again at the Intermodal South America in 2014. This edition was special because it marked the 20th anniversary of the event, the second largest in the world

for the logistics, cargo transport and foreign trade sectors. The exhibition attracted over 600 companies, representing 26 countries and over 48,000 visitors in only three days.

This show is very important for Daikin as we have the chance to meet our customers and service dealers together in one

place. This year we focused on the expansion of business in the Latin America and USA markets. In 2014, Dole Fruit Company Latin America became Daikin's 200th customer worldwide with its purchase of our ZeSTIA model.

We also took the opportunity to show our customers our new Controlled Atmosphere (CA) technology. Daikin will continue showing its commitment to the Latin American market by exhibiting at the next Intermodal South America, which will be held in Sao Paulo on the 7th to 9th of April, 2015.