Spring 2016
THE NEWSLETTER FROM DAIKIN REEFER

DEGREE CELSIUS

DRS celebrates 100,000th unit

100,000th unit rolls off the production line at Daikin Refrigeration Suzhou (DRS)

NYK invests in Daikin Active CA

Japanese carrier NYK orders advanced containers fitted with LXE10E136 with Daikin Active CA

Minimising the environmental impact of refrigerants

Daikin's latest report on its environmental policies

Welcome

From Katsuhiro Tetsuya, Director of Daikin Reefer Container Sales Division

Welcome to the Spring 2016 edition of the Daikin Reefer newsletter, issued to coincide with two key industry events: Intermodal Asia in Shanghai this March and Intermodal South America in Sao Paulo during April.

As usual, Daikin Reefer will exhibit at Intermodal South America and we look forward to welcoming customers and partners to our booth, B120. During Intermodal Asia, we will hold our annual reception and tour of our DRS factory, which recently celebrated production of 100,000 units. You can read about DRS and its milestone later in this edition.

Also in this newsletter, we report on Daikin's current research and development work on refrigerants of the future. As we all know, climate change is now high on the global agenda. If ratified, the Paris Agreement drawn up at the recent COP 21 meeting will commit 196 participating nations to major reductions in man-made greenhouse gas (GHG) emissions over the coming years. Significant new legislation is already in force in Europe and elsewhere to reduce emissions from fluorinated gases (F-gases). Finding alternative refrigeration and air conditioning solutions to 'keep the world cool' is therefore a high priority and Daikin is committing considerable R&D resources to this effort. Technology innovation is at the heart of the Daikin Group philosophy and we are pleased to share news in this issue about the opening of our new research facility in Osaka. This groundbreaking facility has been developed to bring together the best and brightest minds from within and outside the company, to stimulate creativity and spur new breakthroughs.

During Intermodal Asia we will hold a tour of our DRS factory, which has now produced its 100,000th unit

We are also pleased to report on our valued customer NYK, which has recently purchased new reefer units fitted with the Daikin Active CA system as part of a major order for 2,000 Daikin LXE machines. As we have been reporting in recent newsletters, Daikin Active CA is the outcome of intensive research, drawing on atmosphere management technologies developed and proven in demanding applications, including the medical sector. The system has already demonstrated its ability to quickly achieve the required atmosphere, making it suitable for use in shorter voyages such as regional trades in Asia and elsewhere. NYK is just one of the customers featured in this edition. We are also pleased to report on Vladreftrans, a client using Daikin technology in the very demanding Russian market, and to share news about our expanding customer base for domestic and secondhand reefer unit sales in China and India.

If you have a story to share, or a topic that you would like us to discuss in future editions, please do not hesitate to contact us. We look forward to meeting many of you in person at upcoming trade fairs in Asia and South America and wish you every success for the year ahead.

Katsuhiro Tetsuya
Director
Daikin Reefer

Daikin technologies

Daikin inaugurates its new Technology & Innovation Center in Osaka, Japan

On 25 November 2015, Daikin held the opening ceremony for the Technology and Innovation Center (TIC), our new research facility in Osaka, Japan. Serving as the hub for technological innovation across the Daikin Group, the TIC assembles the best and brightest minds from around the world, both inside and outside the group, and provides them with the very latest in research and testing facilities.

The vision for TIC is to create new value, based on the world's best technologies and highly differentiated products. By gathering people together from diverse backgrounds, across national borders, and from inside and outside the company, the aim is to consolidate individual strengths and passion and foster collaborative innovation. The six-floor facility will enable visitors to hold discussions, deepen collaboration, find partners, and discover new possibilities for the future.

The TIC is both the product of and a test bed for innovation. Advanced environmental technologies, primarily in air conditioning, have been used in the buildings and equipment, serving as a model for solutions that simultaneously provide new levels of energy efficiency and comfortable indoor environments. Energy consumption at the TIC is already 70% less than that of conventional

The opening ceremony for the Daikin Technology and Innovation Center on 25 November 2015

The TIC has the first 10m electromagnetic semi-anechoic chamber for air conditioners in Japan

Zero Energy Buildings - the TIC's advanced buildings offer high levels of comfort with minimum environmental impact

buildings and the goal is for the facility to be certified as a Zero Energy Building (ZEB) by 2020.

"At the heart of development that generates technology innovation stands collaborative creation, which utilizes partnerships and alliances with companies, universities, and research organizations with technology in different fields and industries for a fusion of technologies to create new value," says Yuji Yoneda, TIC General Manager. "In establishing TIC, we aim to attain the world's number one technological capabilities through collaborative innovation and fulfil our mission regarding both monozukuri, providing goods, and kotozukuri, providing experiences through the creation of new value for customers and society."

Early research ideas for innovation in reefer container transport and perishable cargo care include:

- Non-contact sensors to monitor perishable cargo
- Improvement in control of perishable cargo ripening, ageing, moisture and mold
- Remote monitoring of reefer machinery performance via the Internet
- Cloud-based self-diagnosis and failure prognosis

For more information about the TIC visit www.daikin.com/about/corporate/tic/index

Customer focus

Japanese carrier NYK invests in 2,000 new Daikin LXE reefer units including Daikin Active CA capability

As part of a major investment in refrigerated container equipment, Japanese carrier NYK has placed an order for 2,000 technologically advanced 40ft high cube refrigerated containers fitted with the latest Daikin LXE10E136 series, our most efficient and reliable LXE model ever.

The new order includes 100 Daikin Active CA (controlled atmosphere) containers. The advanced technology of these CA units helps enhance produce quality and freshness and extend the shelf life of sensitive fruits and vegetables.

A key benefit of the Daikin CA technology is its suitability for use even on shorter voyages, such as intra-Asia and other regional trades. The technology behind the system, originally developed to conserve oxygen in medical use, is able to quickly achieve the required atmosphere blend inside the container, by actively generating nitrogen and pumping it into the container to reduce oxygen levels to the required set point.

Compared to other 'passive' types of CA used for fresh produce cargoes, the Daikin Active CA system can reduce

O2 levels much more quickly and achieve the required atmosphere composition in the shortest time. NYK values this feature and expects to transport leafy green vegetables and fresh fruits with Daikin CA, which are generally considered difficult to transport under passive CA due to their low respiration rates

Vladreftrans relies on Daikin for Russian reefer rail and sea operations

Operating reefer containers in Russia is not for the faint of heart. The vast distances, climate and transport conditions involved add up to a very challenging market. Vladreftrans is one of the leading players in Russian reefer transport by rail and sea and Daikin is proud to be the sole provider of the company's container refrigeration units.

Our mutual cooperation began in 2004, when Vladreftrans became the first Russian operator to use Daikin reefer container machines. Over the years, Daikin and Vladreftrans have continually deepened their relationship, sharing information and ideas to improve the performance of our equipment in the challenging Russian operating conditions.

"We've had a great experience operating Daikin's LXE machine and are fully satisfied with its performance under the vibration and severe conditions of transportation by rail in Russia," said Viktor Zinovev, Chief Engineer at Vladreftrans. "Many engineers think that equipment developed by Japanese designers will be too complicated to operate and repair. But once you study and gain experience, you recognize that it's reliable and easy to repair with low M&R costs."

Evgeny Kononenko, General Director at Vladreftrans, adds that the company has been impressed by Daikin's ongoing hardware and software improvements and general approach and commitment to the Russian market. "We are always glad to host Daikin representatives in Vladivostok and participate in annual seminars."

Thank you to Vladreftrans for your constancy of choice, and your positive and inspiring attitude. We look forward to continuing our journey of mutual cooperation.

Resale market

Expansion of the domestic and resale market business on a global basis is a core strategic priority for Daikin Reefer

Among other initiatives, our 'Touch and Feel' (T&F) seminars have been especially effective in introducing Daikin LXE reefer container technology to a new generation of customers in local markets. In this issue, we are pleased to report on some of our key clients in the important emerging Chinese market, and to share information on recent and upcoming T&F events around the world.

Mr. Tomas Zhou of Jun Tai International

Jun Tai International
Founded in 1999, Hong Kong Jun Tai International Container Co Ltd is the one of the biggest container traders in China. The Shenzhen-based company supplies new and used dry freight standard containers and specials, reefer containers and machines, as well leasing and modifying containers for domestic use, including the supply of portable container offices and accommodation blocks. As well as its extensive China network, Jun Tai is active throughout the wider Asia region and also trades into Russia, Europe and the USA.

Jun Tai has supplied Daikin's resale machine for various uses to customers in China, including shipping, transportation and storage. Company President Tomas Zhou commented: "Our customers in Hong Kong prefer the Daikin machine over other manufactures because of the Hot Gas Defrost system. This system has little impact on the cargo during defrosting and is maintenance free, which is cost effective for end users."
www.container-supply.com

Everbright Container
Based in Qingdao, China, Everbright Container Ltd has been active in the box business since 2000, focused mainly on maritime container leasing and trading. The company has attended Daikin T&F sessions held in several locations in China.

Everbright's General Manager Ground Li told us, "Daikin is getting popular in recent years, especially after your resale T&F seminar in

Ground Li of Everbright Container Ltd

China. More and more end users are familiar with the operation and maintenance of the Daikin reefer [and understand] the high reliability."

As well as buying and selling reefer containers, Everbright also deals in gensets and reefer trailers. The company operates its own depot in Qingdao, where it can supply related services including PTI tests, storage and M&R, together with the supply of used spare parts such as compressors, condenser coils and motor fans.

T&F seminar in Bangkok

Customers in the resale market can reduce their energy costs and usage simply by uploading the DTMSII software to their LXE10E units

T&F seminar in Bangkok, Thailand
A total of 19 customers representing shipping lines and dealers attended Daikin's Touch & Feel (T&F) seminar in Bangkok, Thailand on 31 July last year. The session included an introduction to Daikin, plus sales, service and technical presentations. Attendees gave positive feedback about continuous improvements made to the LXE machine in power consumption, pull down and other key performance aspects. They were also informed about some of the unique functions of the LXE10E machine such as hot gas defrost, auto pump down, and Daikin Container Communication System (DCCS) and Daikin Temperature Management System (DTMS). Customers in the resale market can reduce their energy costs and usage simply by uploading the DTMSII software to their LXE10E units.

First T&F seminar in Mumbai, India
On 24 November, we held our first ever Daikin T&F resale seminar in Mumbai, India. Eight dealers took part in the introductory session, which was classroom-based. We received many requests from attendees to hold a more technical session including demonstrations and training on an LXE unit. Demand for new and used reefer units is growing in India for shipping cargoes such as pharmaceuticals, protein (especially pork and chicken), fruits and vegetables.

Daikin has been active in India with its air conditioning products for many years and with the growth taking place in the economy and population, we expect India will also be one of the major reefer container markets of the future. We have taken our first steps to prepare the way, including the appointment of three authorized repairers and planning for parts delivery and after-sales service to customers in India. We are looking forward to hosting more T&F seminars in India and welcoming new users to experience the Daikin difference.

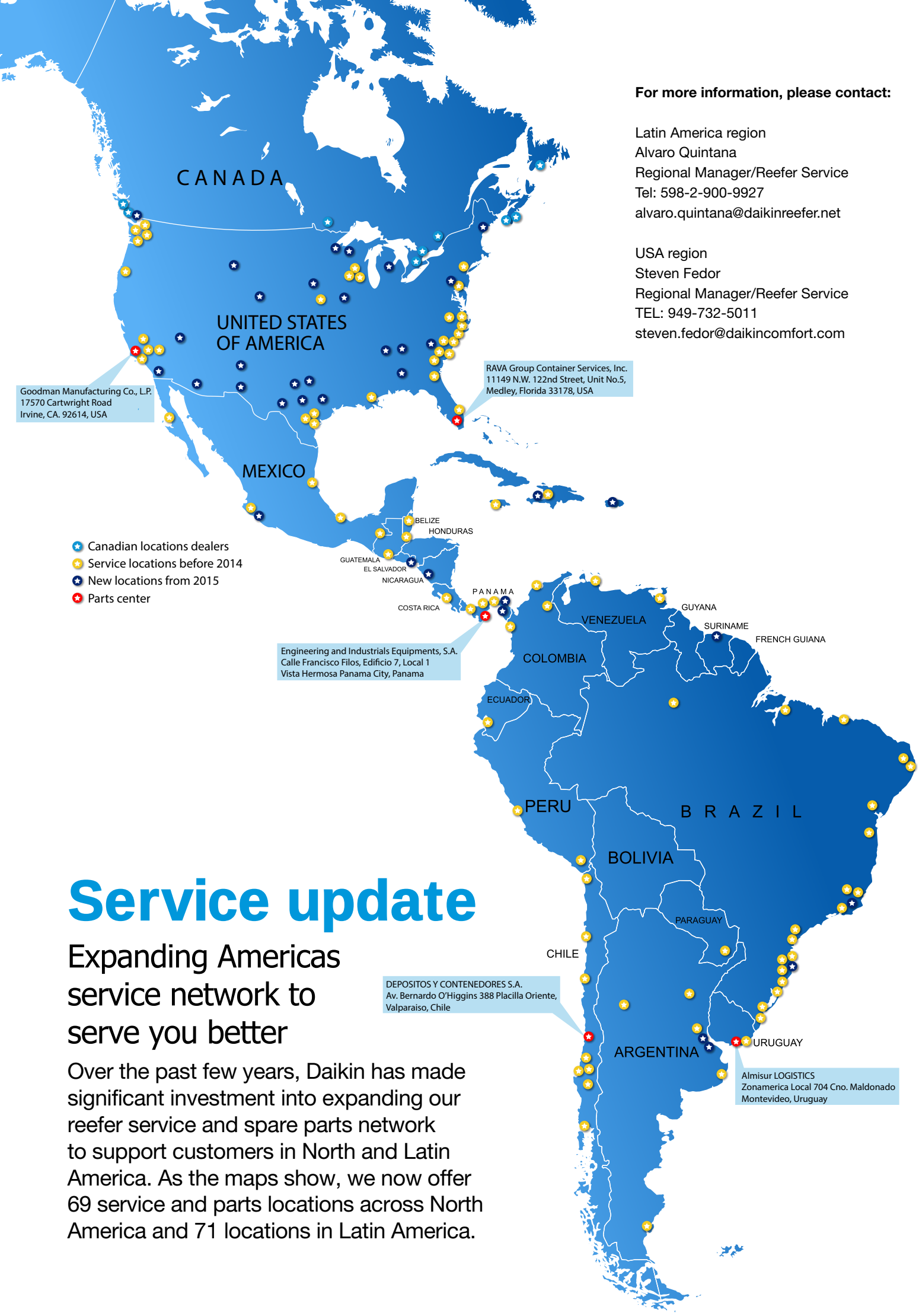
We expect India will also be one of the major reefer container markets of the future

FOR YOUR DIARY

Upcoming T&F Seminars

Los Angeles, USA	March-Apr
Philippines	April-June
Bangkok, Thailand	April- May
Brazil	April- May

Contact info@daikinreefer.com for more details on dates and locations



Service update

Expanding Americas service network to serve you better

Over the past few years, Daikin has made significant investment into expanding our reefer service and spare parts network to support customers in North and Latin America. As the maps show, we now offer 69 service and parts locations across North America and 71 locations in Latin America.

For more information, please contact:

Latin America region
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Regional Manager/Reefer Service
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USA region
Steven Fedor
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2016 service training schedule

Our training seminars are open to service companies, shipping and leasing companies and any others related to the shipping business. These sessions are suitable for reefer technicians or people with some technical background.

Training includes:

- Features and functions unique to Daikin
- How easy it is to set up the machine
- How the machine works
- How to change settings
- How to change set points
- Turning the unit on and off
- Introducing the Daikin controller
- Downloading data from the controller
- How the hot gas defrost system works
- Parts distribution
- Fault codes
- Technical support
- Warranties

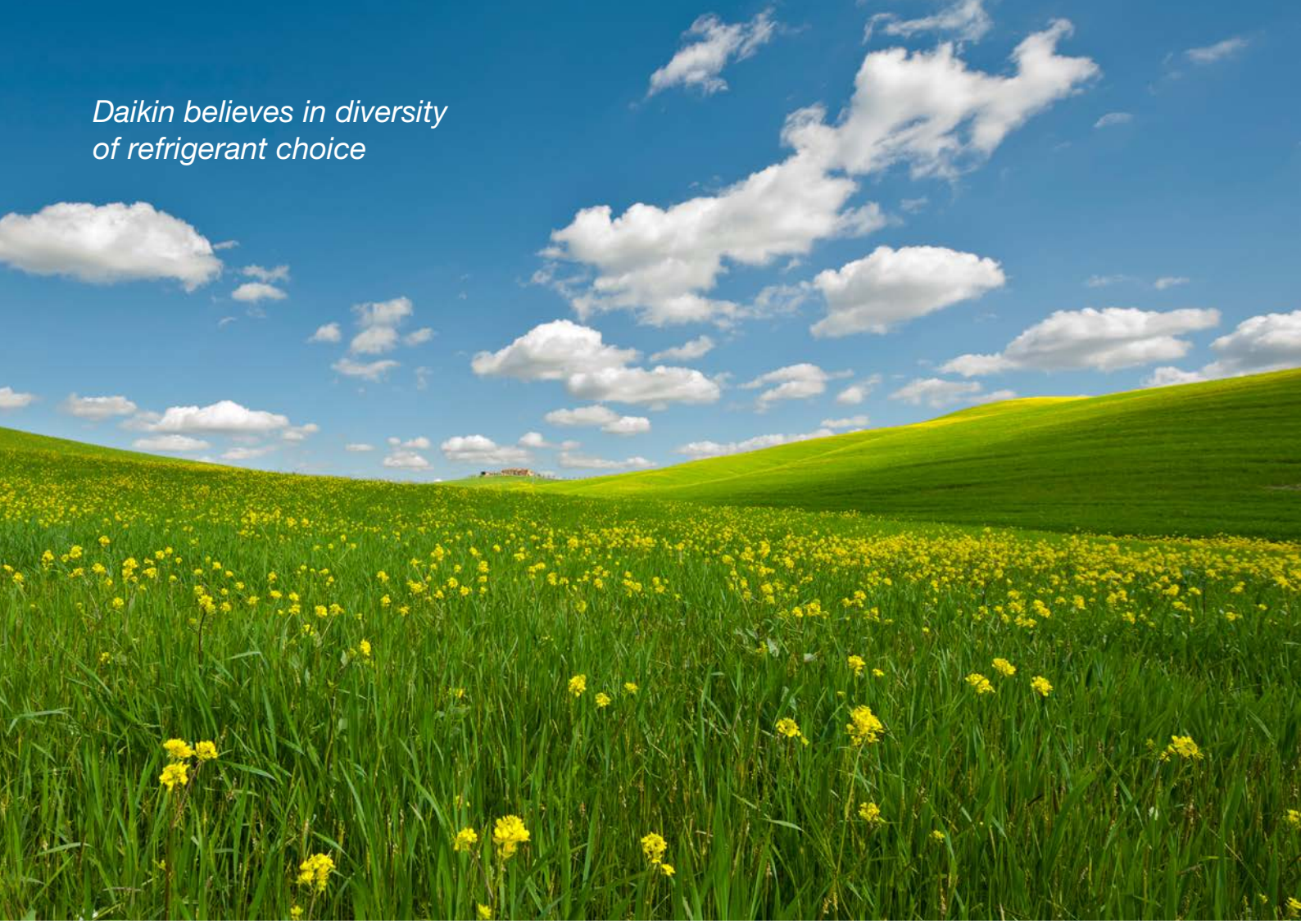
Completed training events

Country	Place
UAE	Dubai
Oman	Sohar
Hungary	Budapest
USA	Las Vegas, NV
Netherlands	Rotterdam
USA	Salt Lake City, UT
USA	Savana, GA
France	Le Havre
Colombia	Cartagena
USA	Las Vegas, NV
Colombia	Uraba
Germany	Bremerhavn
USA	Irvine, CA
Ireland	Dublin
Spain	Vigo
USA	Willmington, DE
Spain	Bilbao
Chile	Valparaiso
Peru	Callao
Colombia	Cartagena
Colombia	Uraba
Brazil	Itajai
Brazil	Santos
Costa Rica	Puerto Limon
Uruguay	Montevideo

Planned future training events

Country	Place
Ecuador	Guayaquil
Paraguay	Asuncion
Brazil	Salvador
Panama	Panama City
Guatemala	Puerto Barrios
Mexico	Veracruz
Costa Rica	Puerto Limon
Argentina	Buenos Aires
Brazil	Rio Grande
USA	Jacksonville, FL
USA	Philadelphia, NJ
Dominican Rep.	Caucedo
Guatemala	Puerto Quetzal
Guatemala	Puerto Barrios
Honduras	San Pedro Sula

For more information, please visit www.service.daikin.com/reefer/contact and contact your local regional managers.



Daikin believes in diversity of refrigerant choice

Refrigerant update

Daikin's policy and comprehensive actions on the environmental impact of refrigerants

Daikin has recently published an in-depth report on its current and future policies and research direction to mitigate the environmental impact of refrigerants. Here, we summarize the major issues.

Daikin provides homes, businesses and industries worldwide with cooling, heating and refrigeration solutions. We also produce fluorochemicals for a wide range of applications such as solar panels, storage batteries, protective coatings, automotive parts and refrigerants. We are constantly mindful of the environmental and climate change impact of our products and are committed to delivering cost-effective solutions to meet these challenges. Daikin supports international efforts to reduce the environmental impact of refrigerants, such as the Montreal Protocol on ozone-depleting substances and the new Paris Agreement following last year's international climate negotiations at COP 21. We also support national legislative initiatives on refrigerants in various regions, such as Japan, the European Union and the USA.

We encourage regional and local incentives for products that are moving to refrigerants with a lower environmental impact, while also providing energy efficiency and other benefits. In short, we believe that public policy that supports this transition is important to minimizing the

environmental impact of refrigerants in the air conditioning, heat pump and refrigeration industry. For its part, Daikin will work with governments, our business partners and stakeholders to continue accelerating the move towards better refrigerant alternatives.

Daikin supports international efforts to reduce the environmental impact of refrigerants

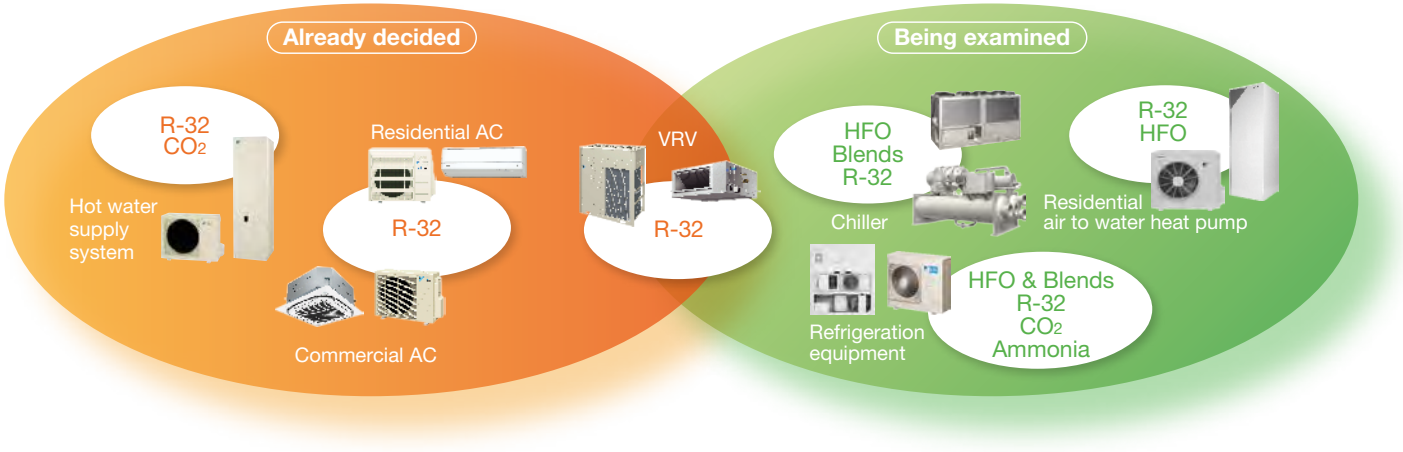
Daikin believes in diversity of refrigerant choice. To reduce the environmental impact of a refrigerant throughout its lifecycle, we evaluate various aspects comprehensively to select the appropriate refrigerant for each application. Our current refrigerant direction and research, as shown in the diagram, covers HFC and HFO refrigerants, refrigerant blends, CO_2 and ammonia as current and/or potential future candidates.

Marine refrigerated containers
Like most of the industry, Daikin has been using R-134a refrigerant for marine containers. In order to reduce the environmental impact, conversion to a refrigerant that contributes less to global warming is called for in the marine transportation industry.

Daikin is researching the use of R-32, which has excellent properties, to meet the requirements of marine containers as well as HFO refrigerants (including blends) and other alternative candidates. In order to safely use these

Daikin's refrigerant direction

Our direction of refrigerant choice for various products in Daikin's portfolio



Note: Other refrigerants not listed above are also applied in products outside of Daikin's portfolio, some examples include hydrocarbons (R-600a, R-290) for refrigerators and window air conditioners or HFO refrigerants for mobile conditioners.

refrigerants, we are conducting risk assessments and taking part in activities to create and satisfy international standards.

Vessel air conditioning and refrigeration
Daikin currently uses R-404A refrigerant for AC and refrigeration on vessels. In order to reduce the impact on global warming, a shift to a refrigerant that contributes less to global warming is called for. In response to the situation, Daikin has completed R-407C product lineup and is further researching other alternatives.

Commercial refrigeration
In the commercial refrigeration industry, R-404A has primarily been promoted as the replacement for R-22. Daikin has contributed to the mitigation of global warming

ahead of the industry by converting to R-410A instead, which has a GWP less than half of that of R-404A and excels in energy efficiency. We are also researching and conducting risk assessments into the use of R-32, HFO refrigerants (including blends), CO2, etc. as future alternative refrigerants.

Air conditioners and heat pumps
Daikin has assessed various refrigerants, including R-32, blends, natural refrigerants and HFOs based on four key criteria: environmental impact, energy efficiency, safety and cost-effectiveness. We have already also applied some of these refrigerants in selected applications. After examining its key properties, Daikin has concluded that R-32 is an optimal refrigerant for direct expansion type cooling and heating equipment and we are now launching R-32 products into the worldwide market region by region. We have already conducted several R-32 risk assessments and continue to do so with larger size systems, as well as contributing to international standards efforts.
In September, we offered worldwide free access to

Daikin has concluded that R-32 is an optimal refrigerant for direct expansion type cooling

93 patents to encourage companies to develop and commercialize air conditioning and heat pump equipment using R-32. Since we launched split type room air-conditioners and heat pumps in Japan, all Japanese manufactures have followed suit. As a result, the Japanese room AC market has completely transferred to R32.

Replacing all the R-410A refrigerant currently used with R-32 could reduce the total CO_2 equivalent impact of HFCs by up to 24% in 2030, along with a significantly reduced amount of indirect CO_2 emissions due to lower energy consumption.

On the other hand, the amount and temperature of hot water that is required for domestic use varies depending on weather conditions, housing environment and lifestyle. For

example, where a large amount of hot water is necessary, CO_2, which can produce higher temperature water, is more appropriate; in systems combined with a heating unit that uses less hot water, R-32 is more appropriate. We are

Replacing all the R-410A refrigerant currently used with R-32 could reduce the total CO2 equivalent impact of HFCs by up to 24% in 2030

proactively promoting development of a variety of products by selecting suitable refrigerants that meet different needs for various applications.

Chillers and air side equipment
At present, R-410A, R-134a and ammonia are all used as refrigerants for applied equipment, depending on the application. In the future, we will consider a wide range of refrigerants, depending on the capacity and application temperature zone, including R-32, HFO refrigerants and blends, and select the optimum refrigerant for each application. We will also maximize our contribution to the

mitigation of global warming by providing optimum systems and managing refrigerants combining the heat source, air side equipment and controls based on users' needs.

Key considerations for refrigerant choice

Our direction of refrigerant choice for various products in Daikin's portfolio

At Daikin we assess four basic factors when making the best balanced refrigerant choice for each application: safety, environmental impact, energy efficiency and cost-effectiveness.

Daikin news

DRS celebrates 100,000 units

Daikin Refrigeration Suzhou Co Ltd (DRS), our container refrigeration factory in China, celebrated an important milestone recently when the 100,000th unit rolled off the production line. From the very first day, the core philosophy at DRS has been to keep quality in mind and provide high quality products for our clients, and this is reflected in the positive feedback received from the many customers that we have welcomed for a factory tour.

Among other aspects, customers have remarked on the impressive quality control system in place at DRS, as well as on the 'Dojo' area, where intensive training is provided for employees. The high standards of cleanliness and safety maintained at the factory have also been observed, together with the focus on environment and energy conservation during the manufacturing process and throughout the facility. Also of note is that Daikin designs and produces not just the reefer machines, but also the various components.

We are looking forward to welcoming customers to DRS again during the upcoming Intermodal Asia show in Shanghai this March!

Daikin Reefer information now available on ITOCHU Metals website

We are pleased to announce that hot topic reports and flash news from Daikin are now available on the website of our long-term strategic business partner ITOCHU Metals Corporation at

www.itochu-metals.co.jp/en

Please enjoy reading and finding out about ITOCHU Metals!!

During factory tours, customers have remarked on the impressive quality control system and intensive training offered to Daikin Refrigeration Suzhou (DRS) employees

Daikin exhibited for the 18th time at Intermodal Europe 2015, in Hamburg

Events report

Intermodal Europe 2015 another success for Daikin

Intermodal Europe 2015, marking its 40th anniversary, took place from 17-19 November at the Hamburg Messe with approximately 6,000 visitors.

Daikin exhibited for the 18th time and welcomed more than 300 visitors to our booth, including customers from shipping lines, leasing companies and the secondhand trade, as well as service dealers and providers.

Our theme for the event was 'Listen and Create New Value', reflecting our European customer focus on, 'We say what we do and do what we say.'

At our booth, we displayed our LXE machine and Zestia unit equipped with a water-cooling condenser as well as our active Daikin CA unit, which visitors were able to see in operation.

Upcoming: Intermodal South America 2016 & NPSA

INTERMODAL SOUTH AMERICA 2016
13:00–21:00, 5–7 April 2016
Transamérica Expo Center, São Paulo, Brazil

Daikin will exhibit at the 21st annual Intermodal South America show, taking place 5-7 April in São Paulo, Brazil. Reflecting the importance of the Latin markets to our business, this will be the tenth year that Daikin has had a stand at this leading event. Please come to visit us on booth B120. For more information, please visit http://intermodal.com.br/en/

NPSA
17–19 April 2016
Dallas, TX, USA

As reported in our last newsletter, Daikin joined the US National Portable Storage Association (NPSA) in 2014 as part of our growing focus on the aftersale market. Please stop by to visit us on booth 515 at the NPSA Conference in Dallas, TX, from April 17–19 2016. For more information, please visit http://www.npsa-us.org

Daikin people

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"I started working with the global reefer container service team in Osaka in December 2015, transferring from Air Conditioner Business Global Operation. During my time with Daikin, I have worked for seven years outside Japan as a Sales & Corporate planner with Daikin France, Daikin Europe (Belgium), and Daikin Saudi Arabia.

"I am excited at the chance to use my previous experience to support Daikin Reefer activities and to gain new skills and knowledge in field service operations."

VERONICA CORREA
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"I was born in Montevideo City, Uruguay, and I have lived here all of my life.

"After university, where I gained qualifications in engineering, I started my career with an small architecture and design company. After getting settled into the office I was plunged into a large residential project, working within a team of six to seven people. We organized and distributed all the tasks amongst ourselves and worked on various types of drawings such as plans, elevations and sections and also lots of hand sketches when designing flat layouts. Based on this experience, I realized that I really loved team work and enjoyed sharing my expertise and teaching others as a coworker. I know this experience will help me fit into any kind of professional team and know how to relate to and deal with new people.

Working for Daikin is one of the most fulfilling experiences of my professional life to date. My new team members have made me feel very welcome and I really appreciate the kindness, joy and enthusiasm with which I have been received, I should like to thank everyone for their confidence and for the help they have given me. Thanks for the opportunity and I am deeply honoured to be part of the team.