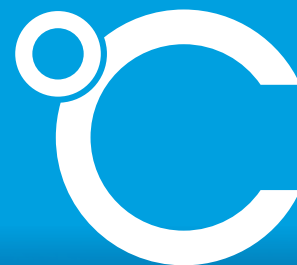




THE NEWSLETTER
FROM DAIKIN REEFER
WINTER 2022



DEGREE CELSIUS

A photograph of a modern showroom interior. A large glass panel is mounted on a wall with a wavy, textured pattern. The words 'Cool Messe' are written on the glass in a blue, brush-stroke style. The room is lit with blue ambient lighting, creating a futuristic atmosphere.

DAIKIN'S COOL MESSE SHOWROOM OPENS IN OSAKA

Welcome

From Kenji Takata, Director of Daikin Reefer
Sales Division

Welcome to the Winter 2022 Edition of the Daikin Reefer Newsletter

As I write this, our team is preparing for Intermodal Europe, taking place in Amsterdam from 8 to 10 November. We are very excited to be returning to this key trade event for the first time in several years. Readers of our newsletter will know that Daikin Reefer typically attends many key trade events around the world each year, and we are looking forward to seeing many of our customers and partners in-person once more at Intermodal Europe. We will be on stand F20 so be sure to stop by and say hello if you are attending the show.

This newsletter brings you our latest news and developments, with a particular focus on what our team has been up to since our last newsletter in Winter 2021.

We hope you enjoy this latest edition!

2022 – container refrigeration trade in focus

Reefer container freight rates rose considerably during 2022, reaching a record USD 6,750 in Q3 2022, but are expected to stabilise towards year end, before declining in 2023, albeit more slowly than dry goods container rates. Some of these reefer freight rates have been unsustainable for perishable cargo owners. The outlook for the market remains overall positive, and Drewry expect that seaborne reefer trade growth will accelerate in the coming years to an average rate of 3% through to 2026.*

It has been a challenging year for reefer container distribution and availability, despite the high demand for them, and this has been influenced by ongoing port congestion and some changes in the import and export balances between the major food and agriculture exporting regions. However, it is predicted that supply chain capacity in the ocean reefer container sector will stabilise in 2023.**

The importance of the cold supply chain and the need for temperature-controlled transportation has never been more apparent, and we are proud to be part of this important industry, supporting the ocean transportation of vital perishable goods across the globe.

A busy year for the Daikin Reefer team

As ever, our team is busy and we're excited to update you on some of our key projects this year. Our "Cool Messe" showroom opened at our Rinkai factory in Osaka and provides a unique collection of marine refrigeration units, air conditioning units and reefer units. The collection highlights how Daikin equipment and technology support the entire cold chain from end-to-end.

Our Life Cycle Assessment initiative is an important step forward towards zero emissions, which is a key deliverable of our Environmental Vision 2050 and you can read more about that in this newsletter too. We've also got an update on our new Daikin Telematics solution.

Strengthening customer relationships

Customers always take centre stage for Daikin Reefer, and we're pleased to be able to share some recent developments with you. Fresh Del Monte, one of the world's pre-eminent vertically integrated producers, distributors and marketers of fresh and fresh-cut fruits and vegetables, has placed its first order for our ZeSTIA unit, for use on its

busy trades between Central America and the USA and Chile and the USA and we report on that here. Marfret and Daikin Reefer have been partners for years, and we bring you news of their growing global reefer service and highlight their successful business. Our relationship with ONE goes from strength to strength and the team there recently shared a video of how its reefer containers equipped with Daikin's ZeSTIA are assembled, which we also share with you in this newsletter. Samskip has been a regular customer of Daikin Reefer since 2004 and most recently purchased our ZeSTIA units, and you can find out more as you read on.

Daikin – global leaders in end-to-end cold supply chain

Customers of Daikin Reefer products will be well aware of our market-leading equipment and technology and our commitment to perishable cargo care, which spans 50 years in the business. In this newsletter we take the opportunity to place the spotlight on our sister division, Daikin Transport Refrigeration, a relatively new business for Daikin that is growing quickly and is already established as a leader in the global container transport refrigeration market. The two divisions share a lot in common and demonstrate how Daikin Industries has knowledge and expertise that spans the entire end-to-end cold supply chain.

Our best wishes for a prosperous 2023

Our team extends its best wishes for a prosperous end to 2022 for all our customers and we look forward to a successful 2023.



Kenji Takata, Director of Daikin Reefer
Sales Division

*source – Drewry's Reefer Shipping Annual Review and Forecast 2022/23

**source - Rabobank

Daikin Reefer's year in overview

It has been a very busy year for the Daikin Reefer team and we are excited to update you on our team's activities.

Daikin Reefer opens new "Cool Messe" showroom at the Rinkai factory in Osaka

A unique collection of Daikin's marine refrigeration units, air conditioning units and reefer units is now on display at the Rinkai factory in Osaka, in a joint collaboration between Daikin's Refrigeration Division and Daikin MR Engineering.

The collection brings together both equipment and technology from three of Daikin's Refrigeration Division's business units: the Marine Air Conditioning and Refrigeration Systems Group, the Reefer Group and the Commercial Refrigeration Group.

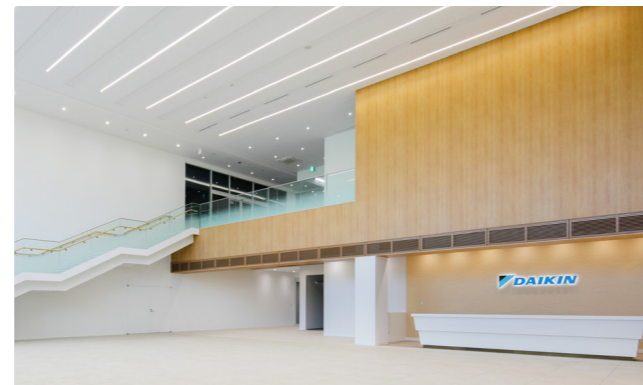
The showroom highlights how Daikin equipment and technology support the entire cold chain from end-to-end, and includes machines, display panels and videos. Separate sections are available in order to demonstrate the important role that Daikin's equipment and technology play in the end-to-end process for fresh produce, from when it is grown through to when it is available for purchase. These sections are: **Production** (the perishable produce is grown), **Transportation** (the produce is transported under optimal temperature-controlled conditions provided by Daikin equipment and technology), **Relay** (where the perishable cargo is then processed as food products) and **Consumption** (where the produce is refrigerated in stores and available for purchase). Visitors can view actual equipment such as reefer units, marine air conditioning units and air purifiers. Daikin's MR Engineering Group's antibacterial and antiviral filters for air conditioners are on display, together with photographs and diagrams of the Group's marine air conditioning and refrigeration systems.

Display panels and videos explain how Daikin's leading CA (controlled atmosphere) technology works to keep perishable produce such as fruit and vegetables under optimum controlled conditions during ocean transit – often over long journeys. The unique blend of low O₂ and high CO₂ that Daikin's CA delivers suppresses respiration and maintains freshness on these journeys, so that the produce 'goes to sleep' and arrives at its final destination in a 'just-picked' state. Visitors can view the commercial air conditioners that provide optimal medium

temperature control for cut crops and these same units also maintain the correct medium temperatures where fresh produce is stocked in refrigerators. Plug-in showcases are on display in the final Consumption section, to highlight how the refrigerators keep produce fresh in supermarkets and other stores.

Visitors can also view an interesting display panel that details the entire history of Daikin's Refrigeration Division.

As Daikin's technology continues to evolve, the Cool Messe will bring in new exhibits so that visitors are kept up to date with Daikin's product launches and technological innovation. To find out more about how you can visit the Cool Messe, please contact the Daikin team [here](#).



The new Cool Messe is located at the Rinkai factory in Osaka

Daikin Reefer's Life Cycle Assessment initiative – an important step towards zero emission

Daikin's Environmental Vision 2050 sets out our commitment to reducing greenhouse gas (GHG) emissions to net zero by 2050. The International Maritime Organisation's GHG Reduction Strategy aims to halve GHG emissions by 2050 and subsequently reduce them to zero by the end of the century, and our Environmental Vision 2050 is our response to this vitally important strategy for all those involved in the marine transportation industry. All the major international shipping carriers have announced their own strategic plans aimed at achieving carbon neutrality between 2040 and 2050.

Daikin Reefer's Life Cycle Assessment (LCA)

initiative forms part of our drive for zero emissions and quantifies the lifetime impact of our reefer machinery's CO₂ emissions from "cradle to grave" – that is, across the entire process from unit production to disposal. We assess these CO₂ emissions across four key stages:

- Production (the raw materials used to build our machinery and the production process itself at our factory including energy consumed)
- Delivery (the delivery of our units by road in trucks to box makers)
- Operation (the power consumed by the reefer unit on-board ships and any required maintenance)
- Disposal (emissions as a result of power consumed during unit disposal or recycle)

It is important to note that recycling and reusing machinery is important to Daikin Reefer and our reefer machinery has a very high recycle rate: we recycle and reuse everything during our manufacturing process and encourage and motivate our dealers to recycle, reclaim and reuse materials as widely as possible.

Our LCA initiative is a clear demonstration of our commitment to using our resources, technology and expertise to solve environmental issues and contribute to a sustainable society. You can find out more about our 'green transition' in our [Winter 2021 newsletter here](#).

Coming soon – Daikin's Telematics solution will improve perishable cargo care

Reefer container telematics using IoT technology has been a fast-growing area of global shipping digitalization in recent years and many of Daikin's container refrigeration units are already fitted with devices from various providers. With its new solution, Daikin will provide a telematics solution to gather, monitor and analyse data from 3rd party devices that interface with its container refrigeration and controlled atmosphere (CA) equipment. The telematics solution will also enable various reefer container fleet operations, diagnostic and maintenance functions to be performed remotely.

The new data solution will be available via desktop, laptop and mobile. It will allow Daikin and customers to continuously check the status and performance of container refrigeration and CA systems onboard ship, at port and inland. IoT telematics solutions help improve perishable cargo care, reduce waste and claims with early detection and remote correction of deviations in temperature and climate control due to human or equipment error.

The Daikin telematics solution will assist reefer container carriers to optimize their fleet operations with early warning of machine malfunctions, remote diagnostics support for repairs and automated functions including equipment software upgrades, data logs and Smart Pre-Trip Inspections (SPTIs) that reduce the cost, time and logistical coordination associated with inspecting and approving reefer container machinery as fit for next shipment.

Going forward, Daikin will mine big data collected from telematics device, using algorithms, machine learning and AI for advanced equipment health checks and performance improvements including predictive maintenance and failure predictions, as well as continuous improvements to design, service and usability.

Daikin's Training and Education programme goes from strength to strength

Daikin Reefer is committed to providing its global service network of customers, technicians, service dealers and reefer mechanics with best-in-class training so that they are able to manage and maintain their Daikin equipment to very high standards, and trouble-shoot any problems quickly and easily. Helping our customers to deliver superior customer service to their customers is a priority for us.

From our "Touch and Feel" sessions through to bespoke in-house training sessions, our team deliver practical and theoretical training across the world. When global travel restrictions were in place, our team continued to deliver training remotely, making best use of video technology to hold virtual training sessions – nothing stops our team from training and supporting our customers!

This year, we have been out and about training in-person once more. From Asia to Europe to South America, our team has been busy!



Daikin Reefer's "Touch and Feel" training sessions are popular with our customers



Spotlight on Daikin Transport Refrigeration

Daikin – leaders in end-to-end cold chain

Customers of Daikin Reefer products will be well aware of our market-leading equipment and technology. With over 250,000 units sold, more than 500 service points globally and over 300 loyal customers, Daikin Reefer is at the forefront of refrigerated container shipping, delivering outstanding temperature-controlled perishable cargo care. From fruit to vegetables, meat to wine, dairy products to flowers and even vital pharmaceuticals, Daikin Reefer’s commitment to perishable cargo care spans 50 years and we continue to innovate, staying true to our core value of “continuous improvement”.

But did you know that Daikin Industries has knowledge and expertise that spans the entire cold chain, and that our comprehensive product portfolio delivers integrated temperature-control solutions that improve quality and safety through every important link in the distribution process – from point of origin through to the final customers? In the first of our new series of “Spotlight On” articles coming to Daikin Reefer’s Degree Celsius newsletter, we’ll be introducing other Daikin business divisions that also deliver important products and services for the cold supply chain.

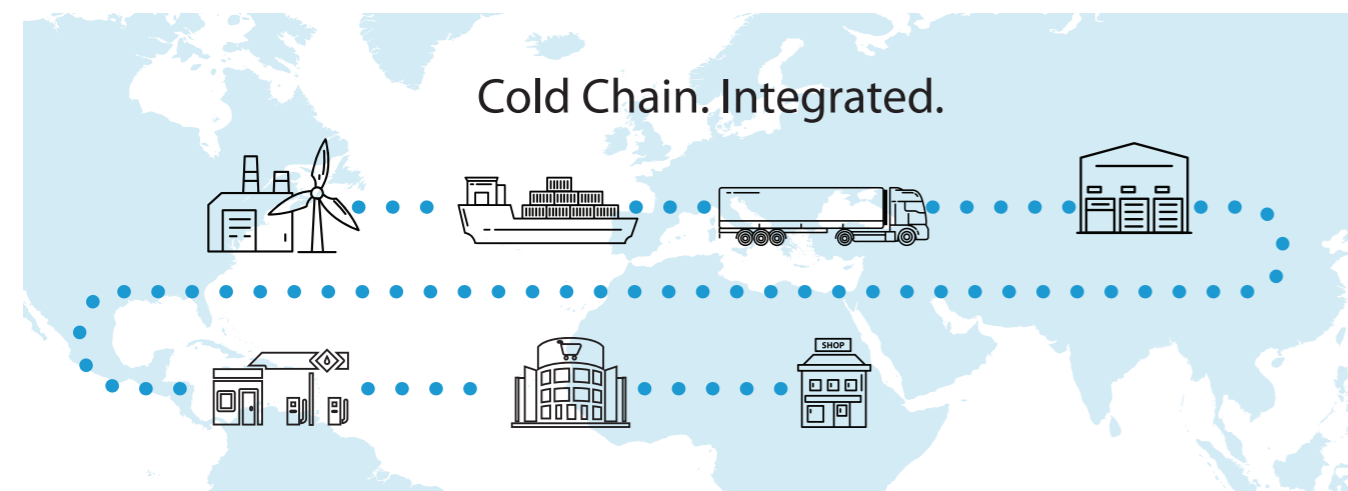
Daikin’s Transport Refrigeration division is a relatively new business for Daikin and is undergoing rapid growth. The division offers innovative solutions for the transport refrigeration market, including trailer units, and offers a range of products and services that meet diverse customer needs in road transport. Daikin acquired Italian refrigeration expert Zanotti in 2016 and quickly integrated the business into Daikin Europe, offering Zanotti’s flagship truck and light commercial vehicle products to market.

Daikin has invested in the Zanotti facility to become the global center of excellence for Transport Refrigeration product development and manufacturing, and will soon expand the site with a world-leading R&D and testing facility, building on the technological know-how and expertise of both Zanotti and Daikin.

Both Daikin Reefer and Daikin Transport Refrigeration are driven by a focus on reliability and leveraging their in-house teams’ technologies to innovate and continually create the best products for their customers. Energy efficiency and reliability are the watchwords for both teams.



Daikin Transport Refrigeration at IAA, September, 2022



Daikin’s equipment and technology serve the entire end-to-end cold supply chain

Whilst Daikin Transport Refrigeration is a relative newcomer to the market, it has already demonstrated its ambition to be a leader in the global trailer transport refrigeration market: for refrigerated trailers platform, first revealed in 2021 as a future-ready solution, is now in the market with Exigo E1500 engine-driven unit, to be followed in 2023 with Exigo E1500e Electric, an engine-less, flexible and clean-energy solution for refrigerated trailers. The team at Daikin Transport Refrigeration see electric mobility as key, but also want to acknowledge the current requirements of their customers – diesel is still the realistic long-haul transport solution in many parts of the world.

Evren Akçora, Business Unit Leader of Daikin Transport Refrigeration recently commented “Daikin is all about energy efficiency and reliability. We might appear to be a new player in this space, but most logistics companies would recognize us as the global market leader for container transport refrigeration.

We aim to bring the best products for our customers. In this case, the reliability we promise comes from our design, development, production and the unique proposition to use Daikin’s in-house components in our products. As for energy efficiency, we are strong advocates of the variable speed technology, in order to optimize unit performance and energy consumption throughout the operating range”.

As with Daikin’s entire business, the Transport Refrigeration Unit is driving towards net zero production and aims to achieve a 50% reduction in carbon emissions by 2030 and net zero emissions across operations and product lifecycles by 2050.

Evren Akçora added, “our main efforts will always be towards sustainability, and we are preparing to guide the transport market to a green future”.

Customer focus



Samskip – the environmentally friendly solution

Samskip was originally founded in Iceland in 1990, but the company's origins date back to 1943 with the formation of Samband Line. Since 1990 the company has undergone dynamic transformation and growth through multiple strategic acquisitions and expansion, resulting in the multinational organization that it is today.

Samskip has been a regular customer of Daikin Reefer since 2004, placing regular and frequent container orders to continuously upgrade its reefer container fleet. In addition, Samskip's own terminal and repair workshop team of skilled reefer engineers and repair staff, led by Director of Terminal Department Elmar P. Lárusson, ensures that Samskip's fleet of reefer containers is constantly updated and remains fit-for-purpose in order to meet the needs of Samskip's customers' valuable refrigerated cargoes.

Viðar Örn Traustason, is the Head of Equipment and Equipment Control, and has overseen reefer procurement in recent years. When asked how he chooses suppliers, he cites the following Samskip values:

- Pioneering • Committed • Reliable • Winning

These values go hand-in-hand with how Japanese businesses typically view engineering and business relationships, which is likely to be a key reason why Daikin Reefer has played such a consistent and important role in Samskip's transformational journey throughout its recent history.

Samskip's most recent purchase was for Daikin's energy efficient ZeSTIA reefer unit. Daikin's vast experience across the entire refrigeration industry is a clear advantage for the Samskip team and Samskip's customers. Daikin's premier ZeSTIA unit harnesses best-in-class technology and is fitted with Daikin's patented DC inverter scroll compressor. This premium unit delivers high levels of cooling performance, temperature precision and low energy consumption with very easy ongoing maintenance for reefer engineer teams. Based on the technologies that firmly established the high reliability and performance of the LXE Series in the container refrigeration market, ZeSTIA is a market-leader in container refrigeration unit today.

"We look for reliability and energy efficiency" says Viðar. "Reliability means constant care for the cargoes of our customers. In addition it is obvious that less need for changes of parts means less production of parts and thus a higher degree of sustainability. Reducing power consumption has a direct positive CO2 reduction effect"



And that brings us back to the subject of this article. In 2021, Samskip achieved a 6.5% reduction in operational carbon footprint compared to its 2020 baseline.

Kari-Pekka Laaksonen, the group CEO expresses it like this:

"We are the environmentally-friendly solution. We may not be perfect, but sustainability is at the heart of what we do. We have built a multimodal network and business model that makes us sustainable by design. However, there is still much for us to do. We will keep pushing to take our vision even further through our innovative processes and ideas. We aim to not just be 'good' or 'compliant' but to be the most environmentally-friendly container transportation company in Europe".

Customer focus



Daikin Reefer and Ocean Network Express (ONE) - long-standing and trusted business partners

Daikin Reefer and Ocean Network Express (ONE) enjoy a successful business relationship that dates back many years. ONE is a global container shipping company headquartered in Singapore offering an extensive liner network service covering 100 countries. The company has the 7th largest fleet in the world. ONE's COOLXtendCA+ service uses Daikin Active CA (controlled atmosphere) technology – COOLXtendCA+ successfully helps shippers and growers expand their businesses globally.

ONE continues to expand its refrigerated container fleet and now maintains one of the largest and youngest reefer fleets in the world, equipped with the most advanced technologies available to successfully transport perishable cargoes across the globe.

The Daikin team is pleased that ONE has adapted ZeSTIA for their first purchase of reefer containers for their own fleet and that they have created a video to highlight this. We're delighted to now share this video with you: watch how the reefer containers equipped with Daikin ZeSTIA are assembled by the ONE team, ready to be put into service and further support the global perishables trade.

<https://www.youtube.com/watch?v=avhsJK8JP0Y>

In September this year, Daikin Reefer visited the ONE office to thank the team for this long-standing partnership.

Mr. Koyama (Senior Vice President) from ONE headquarters commented:

"We are delighted that due to the quality and reliability of ZeSTIA, we are able to guarantee the safety of high-value perishable products throughout their entire transportation. We look forward to Daikin's further development and growth and would like to maintain this long-standing trusted partnership".



Mr. Koyama (Senior Vice President) from ONE headquarters

Customer focus

Fresh Del Monte chooses Daikin ZeSTIA



Fresh Del Monte has placed its first order with Daikin Reefer for 2,200 ZeSTIA units, of which 10 are fitted with Daikin's CA (controlled atmosphere) container refrigeration technology.

Recognised the world-over, Fresh Del Monte is one of the world's leading and pre-eminent vertically integrated producers, distributors and marketers of fresh and fresh-cut fruits and vegetables. Its product range includes prepared fruit and vegetables, juices, beverages, snacks and desserts that are sold in more than 90 countries around the world. The company has an established global footprint and operates in more than 19 countries worldwide.

1,700 of the units acquired by Fresh Del Monte's South American regional office will be used on the busy trade between Central America and the USA, where the primary cargoes are bananas and pineapples, two of the world's most popular fruits. A further 500 units will be used during the 2022/2023 Chilean fruit season on the Chile -USA trade, carrying the primary cargo of grapes with apples, peaches, plums and blueberries also set for transportation.

Daikin's ZeSTIA container refrigeration unit is part of Daikin's market-leading LXE series, launched in 2001.

The LXE series is renowned for its high reliability and performance and the ZeSTIA unit provides a host of outstanding benefits:

- ZeSTIA features Daikin's unique DC inverter technology which delivers energy efficiency and reduces operating costs
- Over 3 million Daikin DC inverter compressors have been supplied since launch, proving their performance, reliability and quality
- Daikin's inverter technology reduces CO2 emissions and contributes to the prevention of global warming whilst providing precise cooling performance for chilled and frozen cargoes
- The ZeSTIA unit combines user-friendly interfaces for easy operation and maintenance
- The high energy-saving performance and stable temperatures of the ZeSTIA unit maintains cargo freshness and high quality during transit

"We are excited to welcome Fresh Del Monte to the Daikin Reefer family"

commented Robert Ferreyra, Sales & Marketing Manager for The Americas Region for Daikin Reefer.



Robert Ferreyra with the Fresh Del Monte team

Customer focus

Marfret – an expert in refrigerated cargo transportation



An expert in the transportation of perishable cargoes in refrigerated containers with knowledge and experience gained since the company was founded in Marseille in the 1950's, Marfret's reefer services are tailored to its customers' requirements and deliver both operational flexibility and service reliability.

Reefer containers have revolutionized the transportation of perishable cargoes such as foodstuffs and Marfret recognizes the importance of shipping in insulated containers in order to protect its customers' fragile perishable cargoes and maintain the integrity of the cold chain. Marfret has an extensive fleet of 20ft and 40ft reefer containers including standard units and some fitted with controlled atmosphere.

Marfret's reefer routes include North Brazil to the Mediterranean and Northern Europe, the Caribbean to the Mediterranean, Northern Europe to South America and from Northern Europe to the South Pacific, Australia and New Zealand and the return route. Further routes also include the Mediterranean to Northern Africa, the Caribbean to Northern Europe, within the Caribbean itself and as of November 2022, a new Egypt to Italy route will be in service.

Thanks to this dedicated reefer service the company continually looks to innovate, maintain and develop its reefer services to meet the challenges of today and aims to develop and maintain a reliable and 'fresh' fleet to support its customers.

To achieve this, MARFRET's Logistics Reefer Specialist, Mr. Donatien RÉMY, remains attentive to its customer needs and ensures that he is continually aware of the latest developments in terms of reefer technology and innovation.

"We want to further develop our routes and reach new destinations for our customers. We've been fortunate to partner with Daikin Reefer for many years and are pleased to work with such a dedicated team that is attentive to our needs"

said Mr Gallinaro, Logistics Manager of Marfret. "Equipment availability, reliability and price are key factors when choosing our fleet, and we know that Daikin's units tick all of these important boxes. Our team is also focused on meeting the industry challenges of today, such as developing a sustainable business that considers the environment and also finding and delivering energy-saving solutions. The reliability and efficiency of Daikin's units can help us meet these important goals" concluded Mr Gallinaro.



Daikin's trade event programme

The Daikin Reefer team has recently attended Asia Fruit Logistica, which took place in Bangkok, Thailand, from 2 – 4 November. This is an important regional event and our booth was busy with visitors. Our team updated visitors on our leading controlled atmosphere and our cargo care solutions. We are really enjoying attending trade events in person once more!



Upcoming events for 2022 and 2023

The Daikin team will be attending Intermodal South America from 28 February to 2 March 2023, at the São Paulo Expo, Brazil.