

SHOWEXPRESS

2024

NO.78

The 35th International Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage

April 8-10, 2024
CHINA INTERNATIONAL EXHIBITION CENTER (SHUNYI HALL), BEIJING



2024

CHINA REFRIGERATION EXPO



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ORGANIZERS



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CRH 2024 will be Unveiled in Beijing

China Refrigeration Expo (Beijing) 2024 is co-organized by Chinese Association of Refrigeration (CAR), China Refrigeration and Air-conditioning Industry Association (CRAA), and Beijing International Exhibition Center Co., Ltd. Supported by Beijing Chamber of International Commerce (BCIC), and the show management is Beijing International Exhibition Center Co., Ltd. (BIEC). The 35th International Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage (hereinafter referred to as China Refrigeration Expo) will be held at China International Exhibition Centre (Shunyi Hall) Beijing from April 8 to 10, 2024.

The theme of this year's China Refrigeration Expo is "More Digital Intelligence and Emerging Tracks for Win-win Growth". There are 8 exhibition halls, covering an area of 106,800 square meters. There will be over 1,000 exhibitors from 27 countries and regions attending the exhibition. In addition, the sponsors of China Refrigeration Expo closely follow the current industry trend and pay attention to upstream and downstream industries. During the exhibition, there will be theme forums, as well as various symposiums and technical exchange meetings with rich content. The sponsors will actively invite chief engineer group from the National Design Institute, the observation group from refrigeration and HVAC industry, and other professional visitor groups, strengthening in-depth exchange with exhibitors. Special exhibition areas will be set up in combination of the hot topics of the industry development, such as the Ozone2Climate Technology Roadshow, Roadshow Area of Integration of Industry and University, and other exhibition areas, providing more exhibitors and visitors with a platform for display and exchange in various market segments. For more news and activities, please check the official publication - the Express, the official website, WeChat public account and official Tik Tok account of China Refrigeration Expo.

China Refrigeration Expo looks forward to meeting you in Beijing!



The first day of China Refrigeration Expo (Shanghai) 2023

绿色低碳
数智冷暖

创新与质量发展
拓展行业新空间



Meng Qingguo
Executive Vice President
Chinese Association of Refrigeration

孟庆国



Li Jiang
Chairman
China Refrigeration and Air-
conditioning Industry Association

数智稳基培新质，旧业态换新符
高质量和合共生，互鉴携手云舒

李江



Congratulatory Message to the 35th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage

08 – 10 April 2024 | Beijing, China

On behalf of the United Nations Environment Programme (UNEP)'s OzonAction, it is my honour to offer our warmest congratulations on the opening of the 35th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage (China Refrigeration Exhibition 2024).

The China Refrigeration Exhibition serves as a global center for innovation and exchange of expertise within the cooling industry. Industry leaders and experts convene not only to showcase and introduce their latest sustainable equipment and cutting-edge technologies, but also to forge partnerships and exchange knowledge. This collaborative environment supports worldwide efforts and accelerates the development of solutions for the protection of the ozone layer and mitigation of climate change guided by the *Montreal Protocol on Substances that Deplete the Ozone Layer and the Kigali Amendment*.

The achievement of Sustainable Development Goals (SDGs) necessitates accessible and affordable cooling technologies that are pivotal in safeguarding and sustaining the global food, healthcare, agricultural sectors, just to name a few. Despite the inherent environmental challenges associated with the cooling sector's rapid expansion and energy consumption, we are committed and have actively embraced our responsibility to find innovative, energy-efficient solutions, as consistently demonstrated at the Exhibition over the past decade.

Lastly, I sincerely express my gratitude to the organizers: *Chinese Association of Refrigeration (CAR)*, *China Refrigeration and Air-conditioning Industry Association (CRAA)* and *Beijing International Exhibition Center Co., Ltd. (BIEC)* for organizing the Exhibition and facilitating a meaningful space for our *Ozone2Climate Technology Roadshow and Industry Roundtable*.

We look forward to participating with fellow international and Chinese agencies, government departments, industry associations, and enterprises and promoting research, development and commercial application of zero-Ozone Depleting Potential (ODP), lower-Global Warming Potential (GWP) and higher energy efficient technologies in the refrigeration and air conditioning sector.

James S. Curlin
Head of OzonAction
Law Division
United Nations Environment Programme





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Paris, February 19, 2024

Letter of congratulations

China Refrigeration is one of the world’s most important events in the refrigeration field.

Refrigeration, including the cold chain for food and health products, air conditioning, heat pumps and cryogenics, is a strategic priority for the coming decades for every country in the world for two reasons: it is essential for human needs, including health and these shall continue to increase; refrigeration plays a very important role on climate change, because of the electricity consumption (about 20% of the world’s electricity consumption) and the use of high global warming potential refrigerants (HCFCs, HFCs)

HCFCs will be phased out before 2030, HFCs will be soon phased down. Thanks to the Kigali amendment. The Kigali amendment was already ratified by most countries, a new Global Cooling Pledge was signed by more than 60 countries at the Conference of the Parties on climate change in Dubai in December 2023. It is a commitment to phase down HFCs but also to dramatically increase energy efficiency. All countries should build National Cooling Action Plans within their Nationally Determined Contributions.

The IIR is committed to meet these challenges with its member countries, including China, thanks to our cooperation with the Chinese Association of Refrigeration. We organise conferences in all continents, we publish technical guides as well as informatory notes for decision makers, training courses, scientific articles. We participate in implementation projects in various regions of the world: please see our website www.iifir.org, become an IIR member to benefit from these services.

Please visit the exhibition: China Refrigeration shows technologies already developed or which will be soon developed to meet these challenges for sustainable development.

I congratulate the organisers of China Refrigeration 2024 and I wish them every success.



Didier Coulomb
Director General



To all our dear friends at CAR and the refrigeration industry in China:

On behalf of the INTERNATIONAL INSTITUTE OF **ALL-NATURAL** REFRIGERATION (**IIAR**), we welcome all the participants to **China Refrigeration EXPO 2024** in Beijing. The IIAR is honored to be associated once again, with the event and its long-standing relationship with the CAR (Chinese Association of Refrigeration). Our sincere congratulations to the CAR and the organizing committee for putting together and hosting such an important event and thank you for hosting us all for the important event, back this year to Beijing, the Capital City of China.

IIAR is the world's leading advocate for the safe, reliable, and efficient use of ALL-NATURAL refrigerants such as Ammonia, CO2 and hydrocarbons. IIAR's members share their collective knowledge and experience to produce consensus documents that address various aspects of the ALL-NATURAL refrigeration industry.

Since 1971, IIAR has been the world's leading advocate for the safe, reliable, and efficient use of natural refrigerants. IIAR sets the standard for providing the most up-to-date technical information to the ammonia and natural refrigeration community. As the only organization writing design and operation standards for natural refrigerants, IIAR is an American National Standards Institute (ANSI) accredited standards developer. IIAR ANSI Standards have been incorporated into building and international codes, making IIAR Standards code documents as well. IIAR members come from all over the world, with some of our valuable material now available in Chinese after translation by the CAR, including system design standards and some training materials for safety and maintenance.

Our VISION: To create a better world through the safe and sustainable use of ALL-NATURAL refrigerants
Our MISSION: To provide advocacy, education, and standards for the benefit of the global community in the safe and sustainable design, installation and operation of ammonia and other natural refrigerant systems.

IIAR wishes all the participants and visitors of China Refrigeration Expo 2023 a very successful conference and exhibition; and we are looking forward to continuing the cooperation with CAR and the China refrigeration industry with the common goal of expanding the use of ALL-NATURAL Refrigerants in China.

With our sincere and warmest regards.

Gary Schriff
 President of the IIAR

Guy J.E. Cloutier
 Regional Vice-Chair – China and Asian Countries
 IIAR International Committee



The President

MAIL – 2024-02-05

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Date
2024-02-09

Letter of congratulations from Eurovent to China Refrigeration Expo 2024

Dear colleagues from the Chinese Association of Refrigeration (CAR) and the China Refrigeration and Air-Conditioning Industry Association (CRAA).

We are delighted to hear of the 35th International Exhibition on Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage, also known as China Refrigeration Expo. In this regard, we would like to take this opportunity on behalf of Eurovent (the European Industry Association for Indoor Climate, Process Cooling, and Food Cold Chain Technologies) and our entire network, to convey our congratulations to the Expo organisers on this year’s exhibition.

The China Refrigeration Expo paves way in acknowledging the critical role the Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) industry plays in regard to sustainability and energy efficiency globally. We appreciate the work being conducted by the China Refrigeration Expo organisers to facilitate points of engagement for industry aligned personnel in order to create a sphere for vibrant solutions to energy efficient, favourable policies and advanced products that provide essential means in the sector in reducing Green House Gas (GHG) emissions. The commitment to energy-efficient practices and sustainable policies takes on added significance with a dedicated emphasis on decarbonisation.

The Eurovent family is certain that the exhibition will be productive. We wish the organisers much success with this year’s edition of the China Refrigeration Expo which will take place in Beijing.

Yours sincerely,

Raul Corredera Haener
President



Eurovent AISBL / IVZW / INPA
European Industry Association
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Francesco Scuderi
Secretary General



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On behalf of the European Partnership for Energy and the Environment – EPEE – which represents the RACHP sector in Europe, I would like to congratulate CAR for organizing the China Refrigeration Expo 2024 which is one of the major international events for our industry sector. At a time when across the world, our industry faces increasing policy and legislative challenges but also opportunities, we need to share latest developments and find alignment where possible. I wish CAR a very successful Expo and conference.

Russell Patten
Director-General
EPEE.



To the Organizers of CRH 2024,

Dear Mr and Mrs,

It is with great honor and gratitude that I write this letter on behalf of ABRAVA (BRAZILIAN REFRIGERATION, AIR-CONDITIONING, VENTILATION AND HEATING ASSOCIATION), to express our deep gratitude for the invitation to participate in the CRH 2024 Exhibition in the city of Beijing.

It is a privilege for us to be able to participate in this prestigious event, which represents an exceptional platform to promote cooperation and exchange in the air conditioning, refrigeration and heating sector. We recognize the significant value of this exhibition as a means of strengthening ties between our entities and our Nations, to drive mutual development in areas of common interest.

We hope that this exhibition will be a great success, that it will serve as a source of inspiration and an international reference for the entire Sector, and that the exhibiting companies will feel motivated to continue investing in innovative products and solutions. We are confident that this event will be an important international milestone for the Sector.

With our best regards,

Arnaldo Basile
Executive President





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 www.ahrinet.org

February 5, 2024

On behalf of the 330 manufacturers of HVACR and water heating equipment that are members of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), I am pleased to extend best wishes to the organizers, sponsors, and exhibitors of the 2024 China Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging, and Storage. We are pleased and proud to once again be able to join you in-person for this year’s show, interacting with our member companies and with our Chinese industry friends. Many AHRI member companies will once again exhibit at an event that so dynamically illustrates the importance of the Chinese market to our industry.

We at AHRI have long-standing ties to China, both through our member companies with operations in China and also through our valuable partnerships with the China Refrigeration and Air Conditioning Association (CRAA) and the China Association of Refrigeration (CAR), both of which help AHRI members do business in China. Through these mechanisms, we collaborate not just on individual business issues, but also on issues of common industry concern, including decarbonization initiatives, energy efficiency, refrigerant policy, and environmental stewardship. While some of that collaboration occurs on an individual company basis, an increasing amount of it occurs through our association partner CRAA, which is a longstanding member of the International Council of Air-Conditioning, Refrigeration, and Heating Manufacturers Associations (ICARHMA), a group that comprises 11 industry associations from around the world.

The fact that our relationships and interactions with old friends are so important to the global industry and to me personally makes me doubly pleased to be able to attend this year’s show. We thank you for your friendship and hospitality and look forward to participating in an excellent show!

Sincerely,

Stephen R. Yurek
 President and CEO





Milan, March 19th, 2024

Letter of congratulations

China Refrigeration is one of the world's leading events in the refrigeration field.

The constraints due to climate change have become more and more pressing. The inescapable need for decarbonization in the Refrigeration, Air Conditioning and Heat Pumps (RACHP) sector is becoming an absolute priority.

Aicarr, the Italian Association for Air Conditioning Heating and Refrigeration is a non-profit cultural association that creates and promotes culture and technology for sustainable well-being. Founded in 1960, AiCARR has always dealt with issues related to the conscious use of energy and natural resources as well as the innovation of energy infrastructure, both in plant and construction.

The sustainability concept has been addressed in the last decades in several ways including the environmental impact of the refrigerant, safety, material compatibility, and cost, among others. It has become evident that the extensive concept of "sustainability in refrigeration" requires a holistic approach which cannot be limited to the sole GWP of the refrigerants, since the impact of the RACHP emissions accounts for about two-thirds of the total impact. Thus, the efficiency of RACHP systems remains probably the main target to achieve. With efficiency as the main goal, China Refrigeration will show consolidated and emerging technologies developed to address the challenges for sustainable development.

We recommend visiting China Refrigeration Exhibition.

I congratulate the organisers of China Refrigeration 2024 and I wish them a great success!

Prof. Claudio Zilio
AiCARR President 2023-2026





**China Refrigeration Expo
 Congratulatory Message
 2023-24 ASHRAE President Ginger Scoggins, P.E., Fellow ASHRAE**



Greetings!

On behalf of ASHRAE and its board of directors, congratulations to the Chinese Association of Refrigeration (CAR) and the China Refrigeration and Air-conditioning Industry Association (CRAA) on the 35th International Exhibition on Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage, also known as China Refrigeration Expo.

ASHRAE’s 2023-24 Society theme *“Challenge Accepted: Tackling the Climate Crisis”* explores integrated solutions to address the effects of the climate crisis through meaningful building decarbonization strategies. It highlights how our industry is becoming equipped with new knowledge to expand energy efficient building design efforts and provide climate leadership and resources to the global built environment.

China Refrigeration Expo serves as a platform to exhibit the latest advancements in technology, highlighting key breakthroughs and accomplishments within the HVAC&R industry. There exists a unique opportunity for us to take a leading role by exchanging knowledge and resources, fostering adaptation and growth in our evolving way of life. China Refrigeration Expo stands as a vital conduit for disseminating information on emerging products and technologies, facilitating collaboration and innovation within the industry.

I encourage you to take full advantage of the opportunities offered during this event. Explore the exhibits, attend the educational sessions, and connect with industry experts and thought leaders. Together, let’s push the boundaries of innovation, share best practices and inspire one another to create a more sustainable and resilient future.

Once again, congratulations. Enjoy your time here, make meaningful connections and leave with new insights that will shape your professional journey.

Sincerely,

Ginger Scoggins, P.E., Fellow ASHRAE
 2023-24 ASHRAE President



Russian HVAC&R society ABOK



On behalf of Russian specialists in the HVAC&R field it is my pleasure to send warmly greetings to the organizers, guests and participants of the China Refrigeration Expo 2024!

China Refrigeration Expo 2024 has become one of the most significant and trustworthy events of the year; it makes a considerable contribution to the solution of the most important professional tasks, because it's an ideal base for the all-round contacts and could demonstrate the overall present-day resources of this branch. The show is characterized by a highly-professional visitor audience represented by the major Chinese and worldwide wholesalers and distributors, engineering design and installation, construction and real estate development companies.

Role of indoor climate quality and energy saving is very important, that these items represent the guideline of the exhibition's ideology and run through the scientific and business program of the China Refrigeration Expo 2024.

Currently, the task of bringing construction resources to the market, and first of all, the resources of the People's Republic of China, is urgent for Russia. These resources should make up for the deficit created due to the inability to supply construction resources from a number of countries exerting sanctions pressure.

I would like to note well thought-out and accurate work of the organizers of the China Refrigeration Expo 2024. These companies open for broad cooperation, they can recruit different organizations, first of all, those determining construction' ideology, and mass media. I would like to note aspiration for more intellectual matter of the exhibition, not only reflecting the present-day state of the branch, but in many respects determining its tendency.

Cooperative work of the exhibition and symposium will set up the best conditions not only for mutually beneficial contracting, but also for promotion of the latest technology and developments in different fields of this branch of industry.

I wish all the participants and visitors of China Refrigeration Expo 2024 every success, expansion of business contacts and mutually beneficial partnership.

Russian HVAC society is looking for the close cooperation with Chinese Association of Refrigeration (CAR) and it's members in the indoor climate quality and energy saving engineering

IURII TABUNSHCHIKOV, President ABOK (Russian HVAC&R society)

Professor, Member of the Russian State Academy of Architecture and Construction Science, President of the Russian Heating, Ventilation, Air-Conditioning, Heat Supply and Constructional Thermal Physics Engineers Association (ABOK), ASHRAE Fellow member, VDI correspondent member



“The Federation of Environmental Trade Associations and the British Refrigeration Association would like to congratulate the Chinese Association of Refrigeration on its 35th China Refrigeration Expo 2024 and hope it is a very successful event for our industry.”

Chris Yates

CHIEF EXECUTIVE

Federation of Environmental Trade Associations and the British Refrigeration Association



ISHRAE (Indian Society of Heating, Refrigerating and Air-conditioning Engineers) extends best wishes to the 35th edition of the China Refrigeration Expo – the show’s dedication in showcasing the latest advancements in the refrigeration and air-conditioning technology is commendable. Through meticulous planning and dedication, you have orchestrated an event that not only showcases cutting edge technology, but also fosters collaboration and innovation within the industry and provides a vital platform for professionals to exchange ideas. C.A.R’s dedication inspires us all to reach greater heights and push boundaries. I am sure with the continuing co-operation between ISHRAE and CAR we can achieve many milestones and move towards a sustainable, eco-friendly and carbon neutral world .

Anoop Ballaney
National President – ISHRAE



Dear colleagues and friends.

On behalf of ISKID, Air Conditioning and Refrigeration Manufacturers' Association and its member companies, I would like to congratulate you and your organization team of "China Refrigeration EXPO 2024".

ISKID was established in 1992, with the contributions of the prominent companies and individuals of the Turkish ACV&R Industry.

ISKID performs activities with its member companies to achieve this aim, not only in Turkey but also abroad for the international customers & partners.

"China Refrigeration" has proven itself as a landmark in the sector of air conditioning, ventilation, and refrigeration throughout the years. It has surely gained a reputation as a successful project. Today, we witness that the exhibition continues to expand, contributing to the prosperity of the sector.

I trust that the exhibition will be a great success again as in the past years.

Tunç KORUN
President of ISKID



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JARN



Congratulatory Message

JARN, as a leading professional media in the HVAC&R sector, records the historical changes across the whole industry over time.

In recent years, key fields such as carbon neutrality, energy storage, big data, IoT, and AI have become hot topics. I believe that the integration of many new energy-saving and environmentally friendly products unveiled at this exhibition with modern information technology will bring huge business opportunities and new experiences. JARN will continue to report the latest market situations to readers around the world.

On behalf of all my colleagues at JARN, I would like to express our sincere thanks to our readers who have given us great support.

The global economic situation was extremely grim in 2023. However, despite the global context, the Chinese market is resilient and is still growing steadily.

As an old friend of China Refrigeration Expo, JARN has witnessed the impressive development of China's HVAC&R industry and China Refrigeration Expo.

I would like to seize this opportunity to wish the 35th China Refrigeration Expo every success! JARN is happy to join forces with industry colleagues to grow and achieve even greater success!

A handwritten signature in black ink, appearing to read 'Jianhua'.

JRAIA

The Japan Refrigeration and Air Conditioning Industry Association

**CHINA REFRIGERATION EXPO 2024**

On behalf of the JRAIA member companies, I would like to express my sincere congratulations on the CHINA REFRIGERATION EXPO 2024 in Beijing that brings together manufacturers, industry experts and visitors.

Last few years, the impact on economic activities due to COVID-19 has been getting over. Face-to-Face events are gradually increasing in Japan.

November 2023, JRAIA held the "International Symposium on the Environment and New Refrigerants" in Kobe for the first time in five years, which was attended by more than 600 people from Japan and abroad. In the end of January, HVAC&R JAPAN 2024 was held at Tokyo Big Sight with no restrictions for the first time in six years. A total 766 booths from 149 companies and organizations participated in the exhibition, which was attracted by more than 33,000 people from all over the world.

We were impressed by the high level of interest in the air conditioning and refrigeration industry, despite the many challenges we face.

The air conditioning and refrigeration industry is advancing various technological innovations and global cooperation to achieve a sustainable society. In addition, there is increasing anticipation for heat pump technology, which contributes to carbon neutrality. We are confident that this industry can contribute to reducing global warming more than ever before.

I believe that CR Expo 2024 will provide the best opportunity for both exhibitors and visitors to exchange information on the latest technologies and to establish new businesses.

Congratulations again and wish all the best with success in this exhibition and hope that our close relationship will last for years to come.

Your Truly

Yasumichi Tazunoki

Chairman of the board,
The Japan Refrigeration and Air conditioning Industry Association (JRAIA),Japan



Congratulation Message to China Refrigeration Expo 2024

Japan Society of Refrigerating and Air Conditioning Engineers
Kiyoshi Saito, President



On behalf of all members of JSRAE, I extend congratulations and best wishes on the success of China Refrigeration Expo 2024, one of the world's greatest events. Looking at the world today, refrigeration and air-conditioning technology has protected human beings from abnormal weather and infectious diseases and provided safe and secure food. Developments of the Refrigeration, Air-Conditioning, Heating, Ventilation, Frozen Food Processing, Packaging and Storage are rapid especially in Asian region including China and Japan. Exhibitions, symposiums, and seminars during the China Refrigeration Expo 2024 will show directions and will give us new ideas and many possible solutions.

I sincerely hope that we work together for growing these important industrial fields and for building a sustainable society. I wish all the success of this grand event China Refrigeration Expo 2024.



Congratulation message for CR EXPO 2024

Greetings,

I am Cheonjae Park, the esteemed President of the Korea Refrigeration and Air-conditioning Assessment Center (KRAAC). On behalf of KRAAC, it is with great honour, that I extend our heartfelt congratulations on the organization of "The 35th of China Refrigeration EXPO 2024." I am privileged to deliver this congratulatory message for the second time since assuming the role of President of KRAAC in December 2022.

The CR EXPO, recognized as one of the foremost global exhibitions in the HVAC&R industry, holds prestigious accreditations from UFI (Union des Foires Internationales), the US DOC (Department of Commerce), and CAEC (China Association for Exhibition Center), solidifying its leadership in the international arena. It serves as the cradle of global facility technology, reflecting the forefront of technological advancements and accomplishments in the HVAC&R (Heating, Ventilation, Air-conditioning and Refrigeration) industry. Furthermore, CR EXPO's significance in addressing carbon neutrality and energy-related challenges has become more paramount than ever.

The world continues to face formidable challenges including climate change, natural disasters, and energy scarcity, which remain sources of global concern. Major nations are intensifying their efforts to establish concrete targets to mitigate global warming, significantly impacting the HVAC&R industry. The enforcement of stringent regulations on HFC refrigerants by the Kigali Amendment and the growing necessity for Low GWP refrigerants have become critical factors within the HVAC&R industry, especially in fields such as heat pumps, refrigerators, and cold chains.

Taking these issues into considerations, we anticipate that this exhibition will serve as a CR EXPO dedicated to fostering the sustained development of the global HVAC&R industry, with the potential to significantly contribute to meaningful technological exchange and industrial advancement between China and Korea.

Aligned with these aspirations, as a distinguished representative testing institution in Korea's HVAC&R industry, KRAAC is unwaveringly committed to contributing to sustained growth and cooperation. This dedication is specifically directed towards pivotal areas such as testing certification, technology development, and energy efficiency policy, all under the overarching objective of advancing the global heating and cooling industry.

In conclusion, I would like to reiterate our congratulations on "The 35th of China Refrigeration EXPO 2024" and express our gratitude to all the officials and staff members of the Chinese Association of Refrigeration (CAR) for their relentless efforts in orchestrating such a successful event.



박천재

Cheonjae Park, President
Korea Refrigeration and Air-conditioning Assessment Center (KRAAC)



Hello.

My name is Sunghye Kang, chairman of Korea Refrigeration and Air Conditioning Industry Association.

As everybody agrees, since China Refrigeration was first held in 1987, it has grown into the world's largest refrigeration and air conditioning exhibition in name and reality. We sincerely congratulate our Chinese friends on your successful opening of China Refrigeration again this year.

The role of the HVAC & R industry has been expanding in relation to global issues such as pandemics, international climate agreements, and carbon neutrality.

The global HVAC&R industry has been working hard to overcome these humanity's common problems and develop new technologies that enable sustainable use.

We hope that new technology products such as products to respond to viruses, heatpump systems incorporating artificial intelligence (AI) smart technology, and high-efficiency chillers using new LOW GWP (global warming potential) refrigerants will lead to industrial development and also create new value in our everyday life.

Lastly, I would like to appreciate the Chinese Association of Refrigeration, China Refrigeration and Air-conditioning Industry Association and the companies that are leading the development of the global heating and cooling industry on their hard work.

We look forward to seeing all of our industry people at the festival of the global refrigeration and air-conditioning industry which is 2024 China Refrigeration soon.

Thank you



Congratulatory Message to China Refrigeration Expo 2024

On behalf of the Korean National Committee of IIR (International Institute of Refrigeration), I would like to extend my warmest congratulations on the China Refrigeration Expo 2024 in Shanghai.

HVAC&R technology plays an important role in energy savings and greenhouse gas reduction, and I'm sure that the China Refrigeration Expo 2024 provides the key to solve these problems. Efficiency enhancement by low energy consumption of the refrigeration and air-conditioning systems is inevitable to achieve the rational use of energy sources. In accordance with the global efforts to reduce carbon dioxide production and environmental protection, HVAC&R society should also cooperate and participate in coping with the worldwide energy and environmental issues. I am sure the China Refrigeration Expo 2024 will provide valuable insights.

Although I cannot personally attend the wonderful event this year, I offer my best wishes to the organizers of the Expo for much success.

Sincerely,

YongTae Kang, PhD, Professor, Korea University, Seoul 02841, Korea

Delegate of Korea, IIR



THE SOCIETY OF AIR-CONDITIONING AND REFRIGERATING ENGINEERS OF KOREA

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February 8, 2024

SAREK Presidential Messages to China Refrigeration Expo 2024

On behalf of my entire organization SAREK, we extend our heartiest congratulations to CAR (Chinese Association of Refrigeration) for hosting the 37th China Refrigeration Expo which is to be held in Beijing on April 8-10 2024.

I sincerely appreciate your friendly invitation and would be happy to attend physically. I expect lots of ideas and products in relation with HVAC&R will be widely found in China Refrigeration Expo 2024, and I am sure it will certainly offer valuable information themes on “More digital intelligence and emerging tracks fro win-win growth” to all participants. As we know well CR Expo has been successfully held for past 37 years. It has been reputed as one of the most significant exhibitions in HVAC&R industry and has established itself as a unique and essential professional exhibition through its 37 years’ consistent improvement and innovation. Events such as the China Refrigeration Expo allow us to see the new technologies shaping our industry, but it simply cannot be enough to see these innovations. We must all work together to make our dream for a sustainable future come true.

We have always kept strong relationship between two organizations as your priority and have never resorted to any wrong means for HVAC-R field. It’s our pleasure that we are working with you from last many years and we have always found fruitful results in our work experience.

Congratulations from all of us for your significant journey of 37 years of success and we hope the same for the future also. And we hope to continue doing relationship with you in future.

With Warmest regards



Jun-Young CHOI, Ph.D.
 President
 SAREK, Republic of KOREA





VIETNAM SOCIETY OF REFRIGERATION AND AIR-CONDITIONING ENGINEERS

HỘI KHOA HỌC KỸ THUẬT LẠNH VÀ ĐIỀU HÒA KHÔNG KHÍ VIỆT NAM
Address: Room 302, Building A3, No 10 Nguyen Cong Hoan, Ba Dinh, Hanoi, Vietnam.
Tel: 0243.771.0543 || Fax: 0243.771.0543 .
Email: lanhdhkk@yahoo.com
http://lanhdhkk.com.vn

Hanoi, March 19, 2024

LETTER OF CONGRATULATIONS

Refrigeration and air conditioning have developed into essential components of contemporary life, influencing many facets of our existence and propelling advancement across numerous sectors. These technologies perform a variety of important and varied functions in modern life, from preserving food and medicine to creating comfortable indoor environments and supporting technological advancements, these technologies play diverse and crucial roles in contemporary life.

And one of the most significant refrigeration-related events in the globe is China Refrigeration. This event attracted great attention from the refrigeration and air conditioning engineering community in the world in general and Vietnam in particular.

Vietnam Society of Refrigeration and Air-conditioning Engineers (VISRAE) was established in 2010. Under legal provisions, VISRAE collaborates both nationally and internationally with associations within the same industry as well as other scientific and technological associations. VISRAE collaborates and coordinates with pertinent branches, ministries, and authorities. VISRAE also organizes the publication of information, magazines, websites, and publications in the fields of refrigeration, and air conditioning engineering, as well as research activities and science and technology services in the Association's areas of expertise. VISRAE hopes to strengthen and enhance our cooperation with Chinese Association of Refrigeration (CAR) in near future.

Given that the China Refrigeration Expo 2024 is scheduled for April, on behalf of VISRAE and the Vietnamese refrigeration engineering community, I congratulate the organizers of this event and I wish them every success.

General Secretary and Vice President of VISRAE



Dr. Nguyen Xuan Tien


台灣區冷凍空調工程工業同業公會
 Taiwan Refrigeration & Air-conditioning Engineering Association



恭祝二〇二四年第三十五屆中國制冷展

大 展 鴻 猷
源 遠 流 長

台灣區冷凍空調工程工業同業公會
理事長 段春雷 敬賀

恭賀二零二四中國制冷展成功

淨零永續
百世宏基

台灣省冷凍空調技師公會
理事長及全體理監事敬賀



2024年中國製冷展

活動圓滿成功

台灣冷凍空調學會 理事長 管衍德 暨全體理事 敬賀



**China Refrigeration Expo
Congratulatory Message
2022-23 ASHRAE Director, Region XIII**



Greetings!

On behalf of ASHRAE Region XIII, we congratulate the Chinese Association of Refrigeration (CAR) and the China Refrigeration and Air-conditioning Industry Association (CRAA) for the 35th China Refrigeration Expo 2024 (8-10 April 2024) in Beijing, China,

Since 1987, the China Refrigeration Expo is one of the big top shows in the world with expected more than 1000 exhibitor and 60,000 visitors from more than 30 countries. This Expo is an important platform for all involved in the HVAC field to bring all players, share information, acquire knowledge and promote mutual benefits. There will be seminars, technical exchanges, exhibition booths and business opportunities for the visitors and participants to benefit from.

I am very glad that our ongoing collaboration between ASHRAE, CAR and CRAA has been mutually highly valued by all the organizations. ASHRAE, CAR and CRAA have much common goals to serve humanity and to promote a sustainable world.

Our collaborations and partnerships will make much advances for humanity and mankind.

Congratulations once again to the Chinese Association of Refrigeration (CAR) and the China Refrigeration and Air-conditioning Industry Association (CRAA) for a successful and exciting CR 2024!

Yours Sincerely,

Leong Cheng Wee
ASHRAE Director, Region XIII (2022-2035)



Congratulatory Message

I extend my warmest congratulations to the Organizing Committee for China Refrigeration Expo on the 35th China Refrigeration Expo 2024 and wish the CR expo great success.

CR expo has consistently played a significant role in nurturing professionals and addressing the evolving HVAC&R requirements driven by climate change and our ongoing decarbonization efforts. This exceptional event brings together experts from various disciplines associated with the HVAC&R industry, providing a valuable platform for professional development. It continues to attract industry leaders and remains a cornerstone of professional growth.

On behalf of the ASHARE – Hong Kong Chapter, I would like to express my heartfelt wishes for a productive and memorable event at the China Refrigeration Expo. May the members of the Chinese Association of Refrigeration achieve continued success in all their future endeavors.



A handwritten signature in black ink that reads "Peter Lam".

Peter Lam
President (2023-2024)
ASHRAE Hong Kong Chapter

Sunghee Kang
 Chairman of Korea Refrigeration and
 Air Conditioning Industry Association (KRAIA)



The Hong Kong Air Conditioning and Refrigeration Association Limited
 香港空調及冷凍商會有限公司

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**A Congratulation Message from the Chair
The Chartered Institution of Building Services Engineers
(Hong Kong Region)**



On behalf of The Chartered Institution of Building Services Engineers Hong Kong Region, I would like to express my warmest congratulations to the Organizing Committee in organising the China Refrigeration Expo 2024.

The 35th International Exhibition on Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage, also known as **China Refrigeration Expo** has always been a platform that showcases innovation, excellence, and advancements in the field. This year's event has surpassed all expectations, highlighting groundbreaking technologies and solutions that will shape the future of refrigeration and air conditioning systems.

I am excited to meet over a thousand of exhibitors to showcase their innovative products, services, and solutions that bring transformative impact to Building Services industry on sustainability, energy efficiency, and environmental conservation.

I am confident that the knowledge, insights, and connections gained during this expo will go a long way in driving a bright future. I look forward to seeing the fruits of our collaboration and partnership in the years to come.

Congratulations once again, and best wishes for a memorable and successful expo.

CHIANG Gary
Chair (2023/2024)
CIBSE Hong Kong Region



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 電話: 2890 2622 傳真: 2890 2653 網址: www.hkaee.org Tel: (852) 2890 2622 Fax: (852) 2890 2653 Website: www.hkaee.org



香港能源工程師學會會長

余达志工程師

敬賀

同心同德
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Timetable for China Refrigeration 2024

DATE	TIME	PROGRAM	VENUE
April 7 th	15:30-16:30	CRH 2024 Innovation Products Launch	Second Floor The Ballroom A, Beijing Kuntai Hotel
April 8 th	09:00-11:50	Opening Ceremony and CRH 2024 Forum	Meeting Room W201, CIEC (Shunyi Hall)
April 8 th	09:00-17:30	Exhibition	CIEC (Shunyi Hall)
April 9 th	09:00-17:30		
April 10 th	09:00-16:00		
April 8 th -9 th	09:30-17:00	CRH 2024 Symposiums	CIEC (Shunyi Hall)
April 8 th -9 th	09:00-17:30	Technical Seminars	Meeting Rooms, CIEC(Shunyi Hall) Second Floor 6+7 Meeting Rooms, Beijing Kuntai Hotel Thrid Floor 8 Meeting Room, Crowne Plaza Beijing International Airport
April 10 th	10:00-11:00	CRH 2024 Golden Award Products Launch	Meeting Room W105, CIEC (Shunyi Hall)

CRH 2024 Forum (Simultaneous Interpretation)

Time	Venue	Topic
April 8 09:20-11:50	Meeting Room W201, CIEC (Shunyi Hall)	<ol style="list-style-type: none"> “Heat Pump+Energy Storage” Assists in the Reconstruction of Carbon Neutral Energy ——Prof. WANG Ruzhu, Director of the Institute of Refrigeration and Low Temperature Engineering at Shanghai Jiao Tong University Building Automation and Control Technologies for Smart, Energy-efficient and Energy-flexible Buildings ——Prof. WANG Shengwei, Dean of the Smart Energy Research Institute, Director of the Building Energy and Automation Research Office, Hong Kong Polytechnic University Extend the International Industrial Chain and Supply Chain, and Build a New Pattern of Dual Circulation Development ——Prof. CHU Xiangyin, Doctoral Supervisor, Director of the China International Brand Strategy Research Center of the University of International Business and Economics, and Chief Researcher at the China Convention and Exhibition Economics Research Association Challenge Accepted: Tackling the Climate Crisis ——Ginger Scoggins, President of American Society of Heating, Refrigeration and Air-conditioning Engineer (ASHRAE)

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Schedule of CRH 2024 Symposium

DATE	TIME	TOPIC	VENUE
April 8 th	14:00-16:30	Symposium 1:Efficient Air Source Heat Pump Building Heating Technology	Meeting Room W102, CIEC (Shunyi Hall)
	13:30-17:00	Symposium 2: Low Carbon Technology and Engineering Application of Refrigeration and Air Conditioning	Meeting Room W103, CIEC (Shunyi Hall)
	13:30-16:30	Symposium 3: Technical Forum on Cold Chain Equipment	Meeting Room W104, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 4: Environmental Construction and Health Promotion	Meeting Room W202, CIEC (Shunyi Hall)
	14:30-16:30	Symposium 5: Senior Engineer Forum	Meeting Room-West of Leisure Area(2nd Floor), CIEC (Shunyi Hall)
	14:00-16:00	Symposium 6: "Focus on New Technologies, Facing the Future" Data Center Cooling Technology Forum	Meeting Room-East of Leisure Area(2nd Floor), CIEC(Shunyi Hall)
	14:00-16:30	Symposium 7: The 15th National Senior Seminar on Ice Machine Industry and the 13th Senior Seminar on Refrigeration Machinery Equipment	Meeting Room E201, CIEC (Shunyi Hall)
	13:30-16:30	Symposium 8: New Technology of Refrigerating Compressor	Meeting Room E203, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 9: Refrigeration System with Oil Free Compressor	Meeting Room E206, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 10: The 6th Indoor Air Purification and Fresh Air Technology Symposium	Meeting Room E209, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 11: COP of Low GWP Alternative Refrigerants	Meeting Room E210, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 12: New Type of Energy Storage and Advanced Low Carbon Technology Symposium	Meeting Room E302, CIEC (Shunyi Hall)
	13:30-16:30	Symposium 13: Technical Innovation and Application for R&AC	Meeting Room E303, CIEC (Shunyi Hall)
	13:30-16:30	Symposium 14: Special Technical Report on New Standards of Refrigeration and Air Conditioning Equipment	Meeting Room E306, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 15: Cold Chain Logistics of Agricultural Products Under Rural Revitalization	Meeting Room E311, CIEC (Shunyi Hall)
	April 9 th	09:30-12:30 13:30-16:30	Symposium 16: 2024 Ozone2Climate Technology Industry Roundtable
09:30-12:00		Symposium 17: Workshop on Low Carbon Development of VRF System	Meeting Room W102, CIEC (Shunyi Hall)
09:30-12:00		Symposium 18: Innovation Technology for Renewable Energy	Meeting Room W103, CIEC (Shunyi Hall)
10:00-12:00		Symposium 19: Industrial Heat Pump Technology and Market Promotion Application Development Forum	Meeting Room W104, CIEC (Shunyi Hall)
09:30-12:00		Symposium 20: Application of Heat Pump in Zero Carbon Heating System	Meeting Room W105, CIEC (Shunyi Hall)

DATE	TIME	TOPIC	VENUE
April 9 th	09:30-12:00	Symposium 21: China Light Commercial Refrigeration Industry Development Blue Book in 2023 Release Ceremony and Technical Roadshow Seminar (Light Commercial Refrigeration)	Meeting Room E201, CIEC (Shunyi Hall)
	09:30-12:00	Symposium 22: Recovery and Utilization Technology of Waste Heat and Residual Pressure in Industries	Meeting Room E203, CIEC (Shunyi Hall)
	09:30-12:00	Symposium 23: Techniques for Compressor Application—R290 Compressor	Meeting Room E206, CIEC (Shunyi Hall)
	09:30-12:00	Symposium 24: R&HVAC for Rail Transit	Meeting Room E209, CIEC (Shunyi Hall)
	09:30-12:00	Symposium 25: Technology Innovation and Application in Industrial Refrigeration	Meeting Room E302, CIEC (Shunyi Hall)
	09:30-12:00	Symposium 26: Symposium on Quality Improvement of Refrigeration and Air Conditioning Components and System Control Technology	Meeting Room E303, CIEC (Shunyi Hall)
	09:30-12:00	Symposium 27: Integration Development of Evaporative Cooling Technology with other Technology	Meeting Room E306, CIEC (Shunyi Hall)
	09:30-12:00	Symposium 28: Cold Chain Low Carbon Technology Application Forum	Meeting Room E311, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 29: Intelligent Operation of Refrigeration, Heat Pump and Air-conditioning Systems: An Eternal Topic always with Creatives	Meeting Room W102, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 30: Low Carbon Technologies for Green Data Center Cooling	Meeting Room W103, CIEC (Shunyi Hall)
	13:00-16:30	Symposium 31: Grid-friendly Refrigeration System	Meeting Room W105, CIEC (Shunyi Hall)
	13:00-16:30	Symposium 32: Seminar of Engineering Ability Cultivation and Teaching Guidance Plan for Students Majoring in Building Environment and Energy Engineering	Meeting Room-West of Leisure Area(2nd Floor), CIEC (Shunyi Hall)
	13:30-16:30	Symposium 33: Low-Carbon Refrigerants: Development and Applications	Meeting Room E209, CIEC (Shunyi Hall)
	13:30-16:30	Symposium 34: Refrigerant Alternative and Energy Efficiency Enhancement in Cold Chain	Meeting Room E210, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 35: LNG Cold Energy Utilization Technology and Application	Meeting Room E302, CIEC (Shunyi Hall)
	13:30-16:30	Symposium 36: Symposium on Energy Storage Technology and Thermal Management Equipment	Meeting Room E303, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 37: China-ASEAN HVAC&R Industry Forum	Meeting Room E306, CIEC (Shunyi Hall)
	14:00-16:30	Symposium 38: Food Safety and Refrigeration	Meeting Room E311, CIEC (Shunyi Hall)

Timetable for Technical Seminars

DATE	TIME	COMPANY	TOPIC	VENUE
April 8 th	09:00-11:30	The Organizing Committee of China Refrigeration Expo Chinese Association of Refrigeration Journal of HV&AC	Technical Seminar of HVAC Industry Users Observation Group	Second Floor 6+7 Meeting Rooms, Beijing Kuntai Hotel
	11:30-13:00	China Refrigeration and Air-Conditioning Industry Association (CRAA)	Press Conference of the 18th China R&AC Industry Science&Technology Contests for University Students	Meeting Room E307, CIEC(Shunyi Hall)
	13:30-16:30	Johnson Controls-Hitachi Wanbao Air-conditioning (Guangzhou) Co., Ltd	JCH-GA's New Heat Pump Product and Industry Solutions	Meeting Room E305, CIEC(Shunyi Hall)
	14:00-16:00	GREE ELECTRIC APPLIANCES	Gree: Saving Energy for System	Meeting Room W105, CIEC(Shunyi Hall)
	14:00-16:00	FLOWINN (SHANGHAI) INDUSTRIAL CO., LTD.	Intelligent IOT Actuator and Applications	Meeting Room E208, CIEC(Shunyi Hall)
	14:00-16:30	Japan Sun Oil Company, Ltd.	Japan Sun OIL Company HYBRID refrigeration oil New product launch	Meeting Room E304, CIEC(Shunyi Hall)
	15:30-16:30	Panasonic Wanbao Appliances Compressor (Guangzhou) Co., Ltd. Guangdong Tili Refrigeration Equipment Co., Ltd.	Introduction of Panasonic Energy-saving·Low-carbon Compressor Commodity Strategy Panasonic Compressor: Cases of New Application Scenarios All-in-One Compressive Solutions for High-end Heat Pump Products: from Compressor, Valve to Inverter, etc	Meeting Room E207, CIEC(Shunyi Hall)

DATE	TIME	COMPANY	TOPIC	VENUE
April 9 th	09:00-12:35	The Organizing Committee of China Refrigeration Expo Building Environment and Energy Application Branch of China Engineering & Consulting Association (BEEAB)	Technical Seminar of National Chief Engineer Delegation	Meeting Room-East of Leisure Area(2nd Floor), CIEC(Shunyi Hall)
	09:30-11:30	Lubrizol Management (Shanghai) Co., Ltd.	Technical communication meeting for the Low GWP Refrigerant application lubricant	Meeting Room E207, CIEC(Shunyi Hall)
	09:30-12:00	China National Institute of Standardization Beijing University of Civil Engineering and Architecture	Seminar on Energy-saving Goals and Evaluation Methods for Room Air Conditioning (Closed-door Meeting)	Meeting Room W202, CIEC (Shunyi Hall)
	09:30-12:00	Shanghai Hanbell Precise Machinery Co., Ltd	HANBELL Introduction and Application Solutions of Air Conditioning Products HANBELL Introduction and Application Solutions of Low temperature refrigeration Products HANBELL Introduction and Application Solutions of High temperature heat pump Products	Meeting Room E208, CIEC(Shunyi Hall)
	10:30-11:30	Chinese Association of Refrigeration ASHRAE National Steering Subcommittee for Higher Education in Building Environment and Energy Engineering	CAR-ASHRAE Student Design Project Competition Award 2023	Meeting Room-West of Leisure Area(2nd Floor), CIEC(Shunyi Hall)
	10:30-12:30	Panasonic	2024 Panasonic Strategy press conference	Meeting Room W201, CIEC(Shunyi Hall)
13:30-16:00	OFFICINE MARIO DORIN S.p.A.	DORIN : Application and technology 1. News on improvement and new series 2. Future opportunity and tendency for semi-hermetic compressors 3. Incoming impact by CO ₂ Transcritical	Meeting Room E208, CIEC(Shunyi Hall)	

DATE	TIME	COMPANY	TOPIC	VENUE
April 9 th	13:30-16:30	FM Approvals	FM Approvals – Passport to Global Market 1.FM Approvals standards for building products and systems— FM 4930 Cooling Tower FM 4920 Air Filter FM 4922 Air Duct FM 4881 & 4882 Interior & Exterior Wall Panel Systems FM 4924 Pipe & Duct Insulation Materials 2.FM Approvals standards for fire protection products and systems— FM5600 Fire Extinguishing Clean Agent	Meeting Room E207, CIEC(Shunyi Hall)
	13:30-16:30	Guangdong Midea Refrigeration Equipment Co., Ltd.	Midea Spring Investment Promotion Conference (Beijing, Tianjin Region)	Meeting Room E305, CIEC(Shunyi Hall)
	13:30-17:30	Xi'an Jiaotong University	Si Yuan Technology Forum on Compressor and Refrigeration	Thrid Floor 8 Meeting Room, Crowne Plaza Beijing International Airport
	14:00-14:45	BITZER	Natural Refrigerants' Green Application in BITZER Products	Meeting Room E301, CIEC(Shunyi Hall)
	14:00-16:00	China Refrigeration and Air-Conditioning Industry Association (CRAA)	Discussion on the Development Prospects of Industrial Heat Pump Market (Closed-door Meeting)	Meeting Room W104, CIEC(Shunyi Hall)
	14:00-16:00	INTERTEK	Technical Seminar of Flammable Refrigerant Testing System	Meeting Room E304, CIEC(Shunyi Hall)

2024 Ozone2Climate Technology Roadshow and Industry Roundtable

2024 Ozone2Climate Technology Roadshow and Industry Roundtable will be grandly held in E3G43 of 35th CRH on April 8-10th.

Ever since Ozone2Climate Technology Roadshow and Industry Roundtable was convened during CRH in 2012, it has grown into a critical platform to exchange Ozone2Climate friendly information amongst HVAC&R sectors, and it has done its indispensable part in achieving the stage-wise contract-fulfilling objective defined in Montreal Protocol for the concerned industries in China and world at large.

Ozone2Climate Technology Roadshow and Industry Roundtable will launch a series of technical show and exchange campaigns. The conference invites experts from the government, international organizations, industrial associations, companies, institutes and universities to introduce the latest policies, laws and regulations, technical development, standards overview, achievements and experience sharing. The roadshow will showcase the latest environment-friendly technologies and products by numerous manufactures from home and abroad.

Schedule of events:

Event		Schedule	Venue
Ozone2Climate Technology Roadshow		9:00~17:00 April 8 th -10 th	E3G43
Industry Roundtable	Policy and challenges	13:30~16:30 April 8 th	
	Green and low-carbon refrigeration technology	9:30~12:00 April 9 th	
	Good practices in the servicing sector	13:30~16:30 April 9 th	

Welcome to log in via scanning as simultaneous interpretation in Chinese and English is available during the roundtable conference.



2024 Ozone2Climate Technology Industry Roundtable (Chinese-English Simultaneous Interpretation)

Time: 13:30-16:30, April 8, 2024

9:30-12:00, 13:30-16:30, April 9, 2024

Venue: Ozone2Climate Technology Roadshow and Industry Roundtable (Booth# E3G43)



QR code for live stream

13:30-16:30, April 8

Opening Ceremony

Moderated by Mr. Shang Shuwen, Deputy Division Chief of MP, FECO

Opening Remarks

Mr. Tian Chengchuan, Director General, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment (FECO)

Ms. Yang Qian, Deputy Division Chief of Ozone Layer Protection, Department of Atmospheric Environment, Ministry of Ecology and Environment

Ms. Elisa Rim, Interim Montreal Protocol Regional Coordinator, South Asia, UNEP

Ms. Beate Trankmann, Resident Representative, UNDP China

Mr. Zhang Zhaohui, Vice Chairman & Secretary General, CRAA

Topic1: Policy and Challenges

Moderated by Ms. Li Xiongya, Section Chief, FECO

Moderated by Mr. Chen Jingliang, Deputy Secretary General, CRAA

Lectures:

1. Implementation Progress and Management Requirements of Montreal Protocol by China

——Ms. Yang Qian, Deputy Division Chief of Ozone Layer Protection, Department of Atmospheric Environment, Ministry of Ecology and Environment

2. Compliance Situation on Montreal Protocol and Sustainable Compliance Challenges in Refrigeration Industry

——Mr. Shang Shuwen, Deputy Division Chief of MP, FECO

3. Overview of the Progress in the Refrigeration and Air Conditioning Servicing Sector in the Asia Pacific

——Ms. Elisa Rim, Interim Montreal Protocol Regional Coordinator, UNEP

4. Kigali Amendment and Sustainable Cooling Initiative

——Ms. Zhou Xiaofang, Director, Chemicals and Waste Hub, UNDP

5. The European Union's 3rd F-Gas Regulation: a Review of Key Content and Outstanding Issues

——Mr. Russell McCleave Patten, Director General, EPEE

6. State of the Refrigerant Transition and Other Industry Issues

——Mr. Stephen Yurek, President and CEO, Air-Conditioning, Heating, and Refrigeration Institute (AHRI)

7. Accelerating Efforts towards Carbon Neutrality 2050

——Mr. Tetsuji Okada, President, The Japan Refrigeration and Air Conditioning Industry Association (JRAIA)

8. Low-Carbon Strategy Drives the Green Development of Refrigeration and Air Conditioning Industry

——Mr. Zhang Zhaohui, Vice Chairman & Secretary General, CRAA

9:30-12:30, April 9

Topic2: Green and Low-Carbon Refrigeration Technology

Moderated by Mr. Chen Guangming, Professor, Zhejiang University

Moderated by Ms. Shi Lin, Professor, Tsinghua University

Lectures:

1. The Roadmap for Implementing Malaysia's HPMP and KIP

——Mr. Ryan Ooi Chean Weai, Senior Principal Assistant Director, Department of Environment Malaysia (DOE)

2. Study on Green and Low-Carbon Development Path of Cold Chain Logistics in Hainan Province

——Mr. Wu Leya, Director, Climate Change Research Center, Hainan Research Academy of Environmental Sciences

3. Global Policy, Market and Technology Trends for Natural Refrigerant Applications in Refrigeration and Heat Pumps

——Mr. Jan Dusek, COO & Head of APAC, ATMOSphere

4. Alternative Refrigerants and Technology in HVACR Industry

——Ms. Kim Minjin, Global Marketing Manager, The Chemours Company FC, LLC

5. The Progress and Application of NH₃/CO₂ Refrigeration System Technology

——Mr. Zhang Huiming, Vice President, Moon Environment Technology Co., Ltd.

6. Development Progress of Rolling Piston Compressors in the Application of Natural Refrigerants

——Mr. Zhou Yi, CTO, Shanghai Highly (Group) Co., Ltd./Shanghai Highly Electrical Appliances Co., Ltd.

7. Progress of Energy Efficiency Standards for Refrigeration and Air Conditioning in China

——Mr. Cheng Jianhong, Professor, China National Institute of Standardization

8. New Development of Compressor for Alternative Refrigerant and High Energy Efficiency

——Mr. Xing Ziwen, Professor, Xi'an Jiaotong University

13:30-16:30, April 9

Topic3: Good Practices in the Servicing Sector

Moderated by Ms. Elisa Rim, Interim Montreal Protocol Regional Coordinator, UNEP

Moderated by Prof. Li Hongqi, Beijing University of Technology

Lectures:

1. Progress of the HPMP Implementation in the Refrigeration Servicing Sector of China

——Ms. Hua Xue, Senior Project Officer, Foreign Environmental Cooperation Center, Ministry of Ecology and Environment (FECO)

2. Green Cooling in a Warming World

——Ms. Malin Emmerich, Advisor, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

3. Opportunities and Challenges of Refrigerant Disposal

——Ms. Hu Junjie, Senior Engineer, China Solid Waste and Chemicals Management Technology Center

4. Refrigerant Reclamation Technology and its Path to Achieving Carbon Neutrality

——Ms. Han Xiaohong, Secretary General, Green Refrigerants Research and Application Branch, CRAA

5. Current Situation and Development Trend of Recycling of Air Conditioners' Refrigerant

——Ms. Cai Yi, Director of Center, China Household Electric Appliance Research Institute

6. Recovery and Disposal of Waste Air Conditioner and Refrigerant under the “Dual Carbon Target”

——Mr. Wang Jiubiao, Director, Zhuhai GREE Green Recycling Resources Co., Ltd.

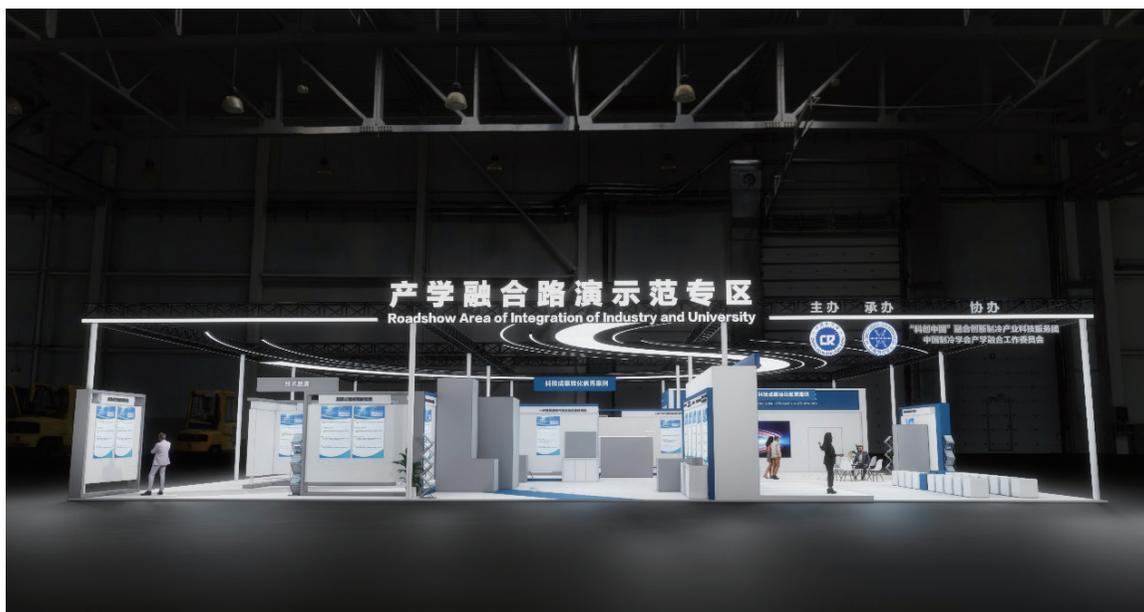
7. Sharing China's Recycling Practices from the Perspective of Refrigerant Management

——Mr. Cui Haifeng, Service General Manager, Trane Air Conditioning Systems (China) Co., Ltd. Shanghai Branch Office

8. Cold Chain Equipment Refrigerant Substitutes and Good Practice Materials Compilation & Training Practices

——Ms. Wang Ruonan, Deputy Director, China Refrigeration and Air-Conditioning Industry Association (CRAA)

The 1st Roadshow Area of Integration of Industry and University to Debut CRH 2024



The 1st Roadshow Area of Integration of Industry and University (Roadshow Area in short) will be solemnly launched during The 35th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage (35th CR Expo) on April 8-10th.

In the grand context of double carbon and energy revolution, the refrigeration industry confronts critical development opportunities. To promote deeper integration of industry and university in refrigeration field, drive the sci-tech innovation, and help China refrigeration sector to accelerate its transformation to lead the world, CR Expo organizing committee decides to put up Roadshow Area of Integration of Industry and University during the expo from 2024 on.

The Roadshow Area is organized by CR Expo organizing committee and undertaken by Chinese Association of Refrigeration (CAR), and co-sponsored by Innovation China integrated innovation refrigeration industry technology service group and CAR integrated industry and university working committee. The area is located in D43 booth, E1 pavilion Beijing China International Exhibition Center (Shunyi Hall), covering an area of 700+ square meters, and falling to two sections: sci-tech fruits transformation outstanding cases and technical roadshow.

I. Sci-tech fruits transformation outstanding cases

There are 11 outstanding cases of sci-tech fruits transformation debuting in the booth, when South China University of Technology professor Liu Jinping will be live interviewed on six typical cases, to develop a close understanding on the products features and industry-university integration approach. The cases list is as follows (in the sequence product name initial):

SN	Product	Company
1	120°C air source high temperature heat pump steamer	Shanghai Nuotong New Energy Technology Co., Ltd. Shanghai Jiao Tong University
2	Single-phase immersion liquid cooling server integrated cabinet	Tianjin University of Commerce Tianjin Tier Technology Co., Ltd.
3	Low energy consumption regenerated MOF compound adsorbing dehumidity material and fresh air dehumidity/waterless humidifying wheel	Beijing University Of Technology Hangzhou Haiao Lvjian Technology Co., Ltd.
4	Electric vehicle trans-critical CO2 heating system	Xi'an Jiaotong University Dongfeng Motor Corporation
5	Multi-stage enhanced efficiency refrigeration/heat pump unit	Tianjin University of Commerce Accuracy (Tianjin) Test Co., Ltd Hebei Hanym Refrigeration Equipment Co., Ltd. Tianjin Lengyuan Engineering Design Institute
6	LynkROS building smart system based on swarm intelligence technology	LYNKROS Technology (Beijing) Co., Ltd Tsinghua University Architectural Energy Efficiency Research Center
7	Variable shunt efficient heat exchanger	Xi'an Jiaotong University Qingdao Haier Smart Technology R&D Co., Ltd.
8	Multi-partition finned building absorptive heat exchanger	Tsinghua University Architectural Energy Efficiency Research Center Inner Mongolia Fulong Heating Engineering Technology Co., Ltd.
9	New energy vehicle low temperature power-driven vortex compressor	University of Shanghai for Science and Technology Shanghai Lagou Automobile Air Conditioning Compressor Co., Ltd
10	One new air energy heat pump direct expansion heater	Beijing University Of Technology Hebei Geling New Energy Equipment Co., Ltd.
11	Smart and efficient freezer and drier set	Tianjin University of Commerce Moon Environment Technology Co., Ltd

II. Technical roadshow

There are 87 programs from 15 universities and research institutes showcased via poster in the roadshow area. The project head will discuss with the attendants in the poster zone during specific timeframe. Wherein, there are 47 programs accompanied with information briefing for involving companies in eight orientations. The experts will introduce the achieved fruits and expected cooperation to erect an exchange platform to contribute to deeper cooperation between university and industry. The poster and briefing for programs namelist is as follows(the briefing programs is in bold, please obtain the timeline in the Roadshow Area of Integration of Industry and University):

Subject	SN	Program	University	Program in-charge	Title
Light commercial refrigeration	1	Fan coil gear optimization control methodology study based on reinforced learning	Beijing University of Civil Engineering and Architecture	Wang Chuang An Jingjing	Lecturer
	2	Cold chain logistics equipment based on integrated stored energy with PCM and vacuum insulation	Shanghai Maritime University	Kan Ankang	Senior Engineer
	3	R290 replacing R404A application and technology in refrigeration equipment	University of Shanghai for Science and Technology	Tian Yafen	Associate Professor
	4	Discrete ice lattice anti-frosting solution	University of Shanghai for Science and Technology	Zhao Yugang	Associate Professor
	5	Refrigeration and constant temperature and humidity artificial environment high precision simulation and optimization	Tianjin University	Yang Zhao	Professor

Subject	SN	Program	University	Program in-charge	Title
Light commercial refrigeration	6	Freezing point regulation application in fresh-keeping	Tianjin University of Commerce	Liu Bin	Professor
	7	Modelling study on fridge refrigeration space temperature and humidity and typical food material loss	Tianjin University of Commerce	Chen Aiqiang	Associate Professor
	8	Industrial application study and promotion on Single tube multi-fin natural convection evaporator	Tianjin University of Commerce	Meng Kexin	research assistant
	9	Independent temperature and humidity control system for biomass gasification assistance for farm perishable food storage	Tianjin University of Commerce	Wu Wenzhu	Intermediate Title
	10	Smart ice temperature vacuum drier	Tianjin University of Commerce	Hu Kaiyong	Associate Professor
	11	finned-tube exchanger enhanced efficiency technology	Xi'an Jiaotong University	Chen Qi	Associate Professor
	12	Refrigeration system energy saving smart control technology double driven by mechanism and data	Xi'an Jiaotong University	Wang Chuang	Assistant Professor
Industrial and commercial refrigeration and parts	1	One independent inlet and outlet two-cylinder rotating compressor and heat pump heat recycle system	Beijing University Of Technology	Xu Shuxue	Associate Researcher
	2	Light commercial refrigerator based on trans-critical CO ₂ refrigeration technology	Shandong Institute of Commerce and Technology	Li Guangpeng	Professor
	3	New irregular aperture air-makeup and increasing enthalpy scroll compressor uprating performance and NVM optimized design study	University of Shanghai for Science and Technology	Zhao Zhaonui	Lecturer
	4	Efficient slice ice machine performance optimized design and research	Tianjin University of Commerce	Sun Zhili	Professor
	5	Thermal recovery CO ₂ film ice field based on solar integrated use	Tianjin University of Commerce	Wang Pai	Lecturer
	6	Ultra-low temperature (mK) absorptive refrigeration technology	Tianjin University of Commerce	Xi Xiaotong	Lecturer
	7	Cross direct cooling shunt automatic block ice machine	Tianjin University of Commerce	Liu Xiaotong	Experimentalist
	8	Import cold chain frozen food virus killing technology and equipment	Tianjin University of Commerce	Fu Hailing	Associate Professor
	9	Modular cold plate gas-liquid radiator to liquid cool server	Tianjin University of Commerce	He Wei	Professor
	10	Scroll compressor virtual design and experimental simulation platform	Xi'an Jiaotong University	Wang Che	Assistant Professor
Heat pump technology	1	Household recycled water instant heat pump heater	Beijing University of Civil Engineering and Architecture	Xu Rongji	Professor
	2	Flue gas source heat pump residual heat recycle accompanied with humidifying nitrogen degradation technology	Beijing University of Civil Engineering and Architecture	Zhang Qunli	Professor
	3	Supercharged bubble absorption type heat pump	Beijing University of Civil Engineering and Architecture	Wang Gang	Lecturer
	4	Waste water residual heat recycle CO ₂ mix working medium high temperature heat pump set	Southeast University	Liu Jian	Associate Researcher

Subject	SN	Program	University	Program in-charge	Title
Heat pump technology	5	Compound heat source cascading high temperature heat pump technology	Tianjin University of Commerce	Dong Shengming	Associate Professor
	6	CO ₂ heat pump drying system dehumidified via combined runner	Tianjin University of Commerce	Sun Zhili	Professor
	7	Variable temperature gas absorptive air source heat pump	Technical Institute of Physics and Chemistry CAS	Gong Maoqiong Lu Ding	Researcher Associate Researcher
	8	Mobile heat pump drying technology for gas and electric purpose	Guangzhou Institute of Energy Conversion CAS	Feng Ziping	Junior Research Fellow
Reinforced heat exchange technology and application	1	High heat flux heat radiator based on two-phase spray cooling	Hefei University of Technology	Zhao Rui	Associate Professor
	2	Water-fluorine interconnected and compound heat exchanging three-medium heat exchanger	Tsinghua University	Li Xianting	Professor
	3	Plate heat exchanger two-phase flow pattern test system	University of Shanghai for Science and Technology	Fang Yidong	Associate Professor
	4	Plated circuit exchanger at sloshing condition	University of Shanghai for Science and Technology	Yang Guocheng	Lecturer
	5	Rectangular cross-section efficient plated circuit exchanger based on full etching process	University of Shanghai for Science and Technology	Ren Yan	Intermediate Title
	6	Efficient ultrasonic atomizing compensating falling film evaporator based on refrigeration system	University of Shanghai for Science and Technology	Zhang Tianjiao	Lecturer
	7	Efficient heat transfer element based on thin liquid film boiling heat transfer	Tianjin University of Commerce	Cui Zhuo	Lecturer
	8	Direct contact heat exchanging technology based on hybrid element strengthening	Tianjin University of Commerce	Fu Hailing	Associate Professor
	9	Diverter study based on pressure wave shock suppression	Tianjin University of Commerce	Yan Lei	research assistant
	10	Dual flow micro-channel evaporator with double feed pipe and air duct	Tianjin University of Commerce	Chen Hua	Professor
	11	Flash efficient atomization and cooling technology	Tianjin University of Commerce	Yang Qingzhong	Lecturer
	12	Low temperature liquid efficient exchanger technology	Xi'an Jiaotong University	Wang Lei	Professor
	13	Heat pump shunt to enable the refrigerant flow more uniform	Xi'an Jiaotong University	Zhang Shengqi	Assistant Professor
	14	Micro-channel multiple loop cascading heat pipe exchanger	Xi'an Jiaotong University	Zhao Rijing	Associate Professor
Control equipment and system	1	Refrigeration system smart faults diagnosis technology considering transplant performance	University of Shanghai for Science and Technology	Han Hua	Associate Professor
	2	Heat pump smart sizing and management software	University of Shanghai for Science and Technology	Chen Yongbao	Associate Researcher
	3	Simulation analysis software development for refrigerating air-conditioning system performance	University of Shanghai for Science and Technology	Xu Jingxuan	Lecturer
	4	Cabin human thermal comfort auto control air-conditioning technology	University of Shanghai for Science and Technology	Li Kang	Associate Professor

Subject	SN	Program	University	Program in-charge	Title
Control equipment and system	5	Central air-conditioner room smart control algorithm	Tianjin University	Wang Yaran	Associate Professor
	6	Minimum steady state super-heat control for multi-evaporator refrigeration system	Tianjin University of Commerce	Chen Aiqiang	Associate Professor
	7	Water cooling unit faults diagnosis technology driven by data	Tianjin University of Commerce	Jia Lizhi	Lecturer
	8	Efficient machine room group control software and edge controller based on Digital Twin	Zhejiang University	Zhao Yang	Senior
Directly expanded air-conditioning heat pump	1	Air-source heat pump energy-saving technology for high heat flow data center	Beijing University Of Technology	Zhou Feng	Facultative professor
	2	Split air-conditioner with temperature regulating and dehumidifying functions	Beijing University Of Technology	Xu Shuxue	Associate Researcher
	3	Uninterrupted heating heat pump system with rotating defrost when working medium over-cold	Beijing University Of Technology	Xu Shuxue	Associate Researcher
	4	One compressor/air source heat pump compound thermal recovery system	Beijing University Of Technology	Xu Shuxue	Associate Researcher
	5	One cascade exchanger and integrated fresh air air-conditioner	Beijing University Of Technology	Xu Shuxue	Associate Researcher
	6	New multi-function direct expanding air-conditioning unit	Beijing University Of Technology	Xu Shuxue	Associate Researcher
	7	Dual evaporating temperature air-conditioner based on cold recovery with independently controlled temperature and humidity	Beijing University of Civil Engineering and Architecture	Hu Wenju	Associate Professor
	8	R290 application prospect in cabinet and room air conditioner and research on its safety measures	Tianjin University	Yang Zhao	Professor
	9	Multi-split air conditioner substitution maturity analysis and safety countermeasures	Tianjin University	Yang Zhao	Professor
	10	Mechanical over-cold air source CO ₂ heat pump heating system	Tianjin University of Commerce	Dai Baomin	Associate Professor
	11	Vapor compressing combined liquid pump driving loop heat pipe heat recycle system	Tianjin University of Commerce	Liu Shuailing	Lecturer
Stored energy technology (cool/hot)	1	PV power generation phase-changing heat storage and supply temperature regulating technology	Beijing University of Civil Engineering and Architecture	Zhang Qunli	Professor
	2	Sludge incineration slag composite phase change heat storage material technology	Beijing University of Civil Engineering and Architecture	Xiong Yaxuan	Senior
	3	Efficient phase change stored energy material R&D and application	University of Shanghai for Science and Technology	Yang Yingying	Associate Professor
	4	Coupled thermochemistry adsorption storage solar energy refrigeration system	University of Shanghai for Science and Technology	Gao Peng	Associate Professor
	5	Step phase change stored heat system	Tianjin University	Ma Fei	Associate Professor
	6	Massive liquid stored air energy key technology research	Tianjin University of Commerce	Guo Luna	Intermediate Title

Subject	SN	Program	University	Program in-charge	Title
Stored energy technology (cool/hot)	7	PV/optothermal water treatment integrated stored energy system	Tianjin University of Commerce	Chen Miao	Experimentalist
	8	Regenerative carbon-based stereotyped phase changing material research	Tianjin University of Commerce	Wang Tieying	Lecturer
	9	Phase changing stored refrigeration to enrich energy pool real-time forecast and matching unit optimization approach	Tianjin University of Commerce	Tian Shen	Associate Professor
	10	Liquid hydrogen efficient storage technology	Xi'an Jiaotong University	Xie Fushou	Associate Professor
Product/technology for climate change	1	Compressed heat exchange system optimized design methodology for low carbon heat supply	Beijing University of Civil Engineering and Architecture	Sun Fangtian	Associate Professor
	2	Solar energy directly driven ammonia solution CO ₂ capture regeneration technology and integration process	Beijing University of Civil Engineering and Architecture	Wu Haifeng	Associate Professor
	3	Reef distributed solar energy air-generated water device	Huazhong University of Science and Technology	Cai Dehua He Guogeng	Associate Professor
	4	Cell thermal management system based on micro-channel liquid cooling plate	Shanghai Maritime University	Tian Zhen	Associate Professor
	5	Insulation construction thermal performance and defects NDT method	University of Shanghai for Science and Technology	Yang Yingying	Associate Professor
	6	Low temperature carried steam separated desalination technology	University of Shanghai for Science and Technology	Mao Yunfeng	Lecturer
	7	Express train IGBT module drikold particle injecting technology	Tianjin University of Commerce	Ning Jinghong	Professor
	8	Green liquid cooling integrated solution based on green power direct supply+thermal recycle	Tianjin University of Commerce	Wang Zhiming	Lecturer
	9	Cold-chain logistics rot fresh produce hydrothermal liquefaction to generate bio-oil technology study	Tianjin University of Commerce	Li Wanqing	Experimentalist
	10	Apple fresh-keeping temperature fluctuation Δ Q10 and quality deterioration molecule mechanism study	Tianjin University of Commerce	Chen Lan	Lecturer
	11	Auto air-conditioner refrigerant leak testing method and key equipment study	Tianjin University of Commerce	Ren Jiabao	Senior Engineer
	12	Micro-channel phase change heat transfer power cell thermal management system	Tianjin University of Commerce	Guo Hao	Lecturer
	13	-80°C~-40°C zone substituting R23/R404A low GWP blending refrigerant development and application	Xi'an Jiaotong University	Liu Ye	Senior Engineer Associate Researcher
	14	Electric car trans-critical CO ₂ thermal system key technology based on direct cooling and heat	Xi'an Jiaotong University	Cao Feng	Professor
	15	Small-size elastothermal refrigeration cold water unit	Xi'an Jiaotong University	Qian Suxin	Professor

Welcome to visit and discuss in Roadshow Area of Integration of Industry and University during April 8-10th.

Industrial Heat Pump Assists Double-carbon Goal Makers and Users to Jointly Draw Blueprint ——CRH 2024 Heat Pump Pavilion

CRH 2024 Heat Pump Pavilion will exhibit during the 35th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage on April 8-10th.

China industrial heat consumption make up over 60% of the nationwide heat consumption gross, and is the major consumer in this sense. Over half of our industrial consumed energy is converted to residual heat in the form of waste water and gas, wherein merely 30% is reused, which is the major cause of the low energy use efficiency. The heat pump could recycle and reuse the waste heat in the process, which could significantly save the consumed energy and CO₂ emission. With the constant rise of the non-fossil energy share, it is an inevitable option to make use of the electric driven industrial heat pump to achieve green, low carbon and sustainable development.

At present, in promoting the heat pump in each field, the industrial heating users get no access to know the industrial heat pump energy supply cases, the user end worries about the current process replaced by heat pump, which may lead to safety and reliability concern. To promote the industrial heat pump technology and application, the heat pump pavilion will launch campaigns to promote its application. the heat pump pavilion is organized by CRH organizing committee, undertaken by CRAA, assisted by CRAA heat pump branch and GMPI, and the domestic forefront heat pump and parts makers also offer great supports.

The heat pump pavilion is located in E4J02, China International Exhibition Center (Shunyi Hall), Beijing, covering an area of around 300 square meters, follows the theme of industrial heat pump technology and market application, fully showcasing the industrial heat pump technical merits and industrial application in energy conservation and carbon emission reduction. The major heat pump makers in China, such as Tongfang, Nuotong, Moon-tech, Yuanda, EBARA, ARCO, PHNIX, Johnson Controls–Hitachi, COMER, who bring in their latest technologies and products. Midea, Haier, Tongfang, Nuotong, Moon-tech, Yuanda, EBARA, PHNIX, Johnson Controls–Hitachi and COMER will showcase their advanced and mature application cases in their specific fields in their respective booths. The following compressor makers, for instance, Danfoss, Bitzer, Sonyo and Dalian Xuanke will display their latest compressor technology achievements and commercial applications.

At 10:00-12:00 April 9th, in the exposition center W-104 conference room, the forum on industrial heat pump technology and marketing application will be held. The forum follows the theme of higher heat pump quality, new technology and industrial application, an open-up technical seminar. The forum will focus on the following subjects to make deeper discussion: industrial heat pump standards system-building, high temperature heat pump energy-saving solution and its saved energy outcome and prospects, high temperature heat pump and industrial heat pump exchanger reinforced heat transfer tube development history, industrial high temperature heat pump technology and its application scenarios introduction, and Danfoss industrial heat pump overall solution. To build an exchange platform to promote and apply the industrial heat pump, making the users to develop deeper understanding on the heat pump latest technology and application, enabling the makers to really explore the user demand on the heat and cold, on the very day 14:00-16:00 in expo center W-104 conference room, the closed door meeting on the topic of industrial heat pump market prospects will be launched. The following guests from the milk, beverage, beer and alcohol sectors high-end users on using the cold/heat and industrial heat pump professional manufacturer will discuss together, contribute their parts to the green and low carbon development in the industrial sector.

Look forward to your arrival at E4J02 and W-104!

Branded Company Twin Aircraft Carrier for Small and Micro Businesses to Learn

— China Refrigeration Air-conditioner Aftermarket Standard Service Exhibition Area Highlight Forecast

The 35th CR Expo is about to hold in China International Exhibition Center (Shunyi Hall) Beijing as scheduled.

China Refrigeration Air-conditioner Aftermarket Standard Service Exhibition Area is an innovative booth under spotlight during CR Expo, which could not only exhibit after-sales market service strength and craftsmanship of all the branded companies, but also offers nice opportunities for numerous small and micro businesses engaging in such field to learn.

Thanks to three rounds of expo endeavor, it is delighting to see the branded companies have deemed the After-sales Market Standard Service Booth as a part to fully display their uniqueness.

The previous companies lay stress on launching new product and technology exchange, and there is no platform to exhibit the aftermarket service. However, as the market racing becomes fiercer, the companies shift from product and technology to after-sales market service, such that the after-sales market service has evolved into the future blue sea for refrigeration sector, who could offer best after-sales service, they could win such market share via being returned with nice economic income.

The branded companies refer the exhibit as double booths, twin aircraft carrier formation, the primary booth dedicates to showcasing the new product and technology, and the secondary booth focuses on displaying their after-sales market standard service and good practices, so as to fully exhibit their features.

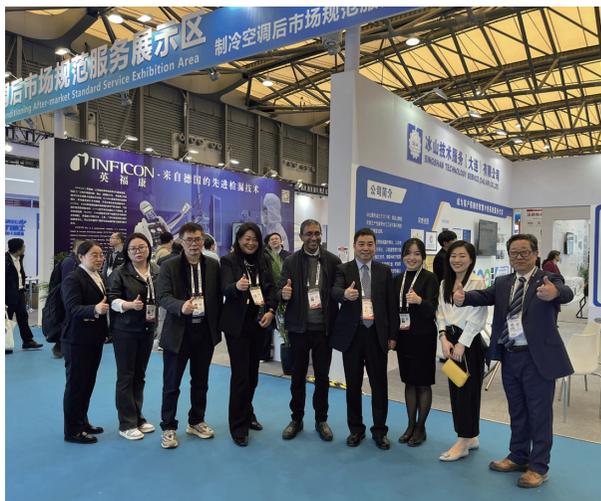
As the after-sales market standard service organizer, it is relieving to know: after years of input, the very start point of putting up the aftermarket standard service area aims to enable the industrial association and expo to create such a platform for the branded companies to normalized exhibit and lead for small and micro business to learn, it has grown into making better the entire sector after-sales service, and working harder at the building the integrity system and carrying forward the craftsmanship with initial achievements.



The preparation period of CRH China Refrigeration Air-conditioner Aftermarket Standard Service Exhibition Area coincides with the State Council notice release on carrying out the Newly Amended Ozone Depleting Substances Management Act.

To respond to it, the booth especially publicizes the Ozone Depleting Substances Management Act in ODS filing exhibition zone, we tend to invite the concerned departmental leaders or experts to expound the Act and brief about the ODS filing process.

To fully exhibit the international advanced refrigeration air-conditioner Aftermarket standard service philosophy, the booth invites AFRISO Measurement Control Technology Ltd to all-round show century-old branded company service philosophy in Germany and Europe at large in the refrigeration after-sales market service before technically leading Germany 5S Alliance.



The Area is highly appraised by UNDP, UNEP officials and Ministry of Ecology and CRAA leaders

The company life lies in the safe and civilized construction, repair and maintenance, also specific embodiment of CPC and government care for the companies. The Area also erects the safe and civilized construction safeguards zone to exhibit the international advanced refrigeration air-conditioner measurement instruments and tools, which offers safe and civilized construction, repairing instruments and tools and warranty for after-sales market service companies.

In the public area air quality exhibition zone, the American branded company KONSE engaging in the international public health disinfection field exhibits the international forefront disinfect philosophy and technology in the air-conditioner ventilation cold chain disinfection.

As demanded by after-sales market service small and micro companies, we will continue to hold multiple roundtable campaigns in 2024 (for instance, Gree campaign, Haier campaign, Moon-tech campaign, Bingshan campaign, Ozone Depleting Substances Management Act, ODS Filing Publicity campaign, safe and civilized construction safeguards and public health disinfection campaign). It is intended to invite branded companies after-sales departmental directors or technical directors to discuss the advanced philosophy and technology for after-sales standard service, create exchanging channel for discussion, look for cooperation opportunities, and guide the small and micro companies to offer normalized service via building the integrity system.

It is convinced that China Refrigeration Air-conditioner After-sales Market Standard Service Booth will be under the spotlight again, a highlight for branded companies to demonstrate and small and micro companies to learn.

Welcome to learn and discuss, come up with your suggestions for China refrigeration air-conditioner aftermarket standard service sector, and contribute your part.

Integrated Innovation to Lead Development

—The 15th Nationwide Design Institute Chief Engineer Group Gather in Beijing

Organized by CRH organizing committee, CRAA and CECA China Engineering and Consulting Association architecture environment and energy applications branch, Beijing CRAA Quality Certification Center Co., Ltd. jointly undertake the 15th Nationwide Design Institute Chief Engineer Group campaign (Beijing CRAA Quality Certification Center Co., Ltd.), which will be inaugurated in Beijing on April 8-9th 2024 during CRH.

2024 marks the 15th Chief Engineer Group campaign on continuous basis, apart from continuously cementing the bi-directional platforms amongst the nation-wide chief engineer, designer and company, the campaign also follows the theme of scientific innovation to create new quality productivity, explores the technology empowerment to build new industry chain. At the context of new situation, discuss how to better develop the technology to promote the low carbon and energy saving to achieve green and high-quality development science ecology, and look forward to the new opportunities and challenges in the HVAC sector.

The Chief Engineer Group campaign follows the theme of integrated innovation for leading development. In vigorous response to the state call of top-quality development, it cultivates innovative driving force and ecology, makes the sector more competitive to empower the industry, explores the innovative route for the industry, university and design, accelerates the refrigeration sector to go for new industrialization, lay stress on green and low carbon pursuit to make possible sustainable development, and create new momentum and merits.

During CRH in April 8-9th 2024, the Chief Engineer Group invites elites from the industry, university and design institute in Beijing to jointly feel the sci-tech forefront trend, share innovative practice case, explore new model of technology empowered industry, and study how to create new quality productivity and achieve green industry ecology.

During the expo, the Chief Engineer Group will launch the following events:

1. Visit the 35th CR Expo in April 8th, the group will make face-to-face technical discussion with the companies in the booth.
2. To integrate the sci-tech with the industry, and to create new quality productivity driving force, the group will attend and witness initiative launch event theming in-depth integration of industry and university to create new quality productivity and "master cup" enlisted companies awarding ceremony sponsored by CRAA and CECA architecture environment and energy applications branch.
3. Attend the integrated innovation to lead the development technical seminar in April 9th. The seminar falls into three parts: chief designer lecture, company speech and interaction. The seminar will be live broadcast.

The chief engineer group campaigns are numerous with core theme at commanding height. CRAA Certification Center sincerely invites your presence to discuss with your counterpart, makes deeper dialogue with chief engineers and experts, and draws on the wisdom of the mass, to jointly launch new journey to go for high-quality development.

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The 18th China Refrigeration Air-conditioner for University Science&Technology Contest for University Students

The 18th China Refrigeration Air-conditioner Sector Undergraduates Technology Contest opening ceremony and press conference will be convened during 35th CR Expo on April 8th, 2024.

China Refrigeration Air-conditioner Sector Undergraduates Technology Contest (the Contest) is mass sci-tech campaign with social welfare attributes for undergraduates and postgraduates. The contest aims to push forward the innovative reform on curriculum system and contents of the university energy and power subject and architectural environment and energy application engineering subject, and assisting the university in achieving the principle of quality-oriented education. The contest dedicates to spread and steer the massive students to vigorously attend the extracurricular sci-tech campaigns, cultivate the innovative awareness via such practices, improve the craftsmanship, enrich the practicing experience, enhance the quality in this connection, and foster more outstanding backup talents in this field. Thanks to decades of endeavor, it has grown into a contesting platform for nationwide energy and power and architectural environment undergraduates to attend.

The 2024 contest is jointly organized by CRAA, Education Ministry of higher education energy and power professional teaching steering committee and Education Ministry of higher education architectural environment and energy application engineering teaching and guidance sub-committee, and especially supported by United Nations Development Program.

In 2024, the contest is continuously cosponsored by BITZER Refrigeration Technology (China) Co., Ltd., Daikin (China) Investment Co., Ltd., Qingdao Haier A/C Electronic Co., Ltd., Shanghai Hanbell Precise Machinery Co., Ltd., Moon Environment Technology Co., Ltd., Fujian Snowman Co., Ltd., and the more international famous companies. The final contest of six regions in North China, East China, Central China, South China, West China and Northeast China is respectively sponsored by Beijing University of Technology, University of Shanghai for Science and Technology, Huazhong University of Science and Technology, Fujian University of Science and Technology, Xi'an Jiaotong University and Shenyang Jianzhu University. The above mentioned six locations for final contest cover every part of China, and it is estimated that there will be over one hundred university delegations attending the finals. Thanks to the joint efforts of these international organizations, educational institution and industrial peers, the contest will support the students from multiple sources.

For more information on the contest introduction and schedule, welcome to attend the 18th China Refrigeration Air-conditioner Science&Technology Contest for University Students kick off and press conference in CRH E307 meeting room at noon April 8th, 2024.

CRH 2024 Innovative Products List

1. Direct Expanded Air-conditioning heat pump

SN	Product	Company	Booth Location
1	Super VRV Multifunction System(Heating & Cooling &DHW)-Extraordinary Series	Zhejiang Zhongguang Electric Co., Ltd.	W2F25
2	Hisense M3 Series VRF Air-conditioner	Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd.	W2D55
3	Mining Explosion-proof Refrigeration Device	Wuhan New World Refrigeration Industry Co., Ltd.	E1F01
4	Hitachi Water Source VRF (Heat Pump) Units	Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd.	W2F61
5	New VRF with IOT Function	Qingdao Haier Intelligent Buildings Technology Co., LTD	W3D41

2. Hot / Chilled Water Chillers

SN	Product	Company	Booth Location
1	Nature Series Air to Water Heat Pump	GD Midea Heating & Ventilating Equipment Co., Ltd.	W3F25
2	Air Cooled Inverter Heat Pump	Shenzhen McQuay Air Conditioning Co., Ltd.	W2F33
3	Ultra-high-efficient Two Stage Compression Screw Chillers with VFD	Gree Electric Appliances, Inc. of Zhuhai	W2D25
4	Large Capacity Vapor Suspension Centrifugal Chiller	Qingdao Haier Intelligent Buildings Technology Co., LTD	W3D41
5	Efficient and Reliable Electromechanical Control Integrated Maglev Variable Frequency Centrifugal Unit	Chongqing Midea General Refrigeration Equipment Co., Ltd.	W3F25
6	Integrated Multi-compressor Aerodynamic Bearing Centrifugal Chiller and the Compressor	Gree Electric Appliances, Inc. of Zhuhai	W2D25
7	SUNRAIN Air Source Heat Pump	Sunrain Group Co., Ltd.	W3D55
8	New R290 Hot and Cold Water Unit	Nanjing TICA Climate Solutions Co., Ltd.	W2F11

3. Air Handling, Transmission and Distribution Equipment and Parts

SN	Product	Company	Booth Location
1	Air C+ (II) Duct Air-conditioner	GD Midea Heating & Ventilating Equipment Co., Ltd.	W3F25

2	EC Centrifugal Fan RadiPac 3C Series	ebm-papst Motor (Shanghai) Co., Ltd.	W1D05
3	ZAplus NextGeneration	Ziehl-Abegg Mechanical and Electrical Equipment (Shanghai) Co., Ltd.	W1F11
4	Anti-frosting Energy Recovery Ventilator for Outdoor Air Handling	EET Jianke (Beijing) Technology Co., Ltd.	W3C67
5	Green High Quality Thin Permanent Magnet Motor	Guangdong Welling Motor Manufacturing Co. Ltd..	W3F55
6	Wilo-ATMOS GIGA-NHT	Wilo China Ltd.	W2D05

4. Compressors

SN	Product	Company	Booth Location
1	12~16HP Variable Frequency Rotary Compressor	Guangdong Meizhi Compressor Limited	W3F55
2	12~16kW Variable Frequency Rotary Compressor	Guangdong Meizhi Compressor Limited	W3F55
3	RC3-IVA High Speed Fully Configured VFD Compressor	Shanghai Hanbell Precise Machinery Co., Ltd.	E2F13
4	VZN Series R290 New Variable Speed Heat Pump Scroll Compressor	Danfoss (Tianjin) Co., Ltd.	E2D01
5	High Energy Efficiency Scroll Compressor with Evaporation Temperature -42°C for Ultra-Low Ambient Temperature Air Source Heat Pump	Sonyo Compressor (Dalian) Co., Ltd.	E1F01
6	Horizontal Rotary Compressor Products for Thermal Management of Energy Storage and Power Batteries	Shanghai Highly Electric Co., Ltd.	E2E37
7	Maglev Refrigeration Compressor EMR235250-11C	EMAGING (Hangzhou) Refrigeration and Air Conditioning Technology Co., Ltd.	E2F51
8	Danfoss Turbocor® TGS380 Compressor	Danfoss Micro Channel Heat Exchanger (Jiaxing) Co., Ltd.	E2D01
9	Hisense Positive-pressure Refrigerant Levitation Oil-free Centrifugal Compressor	Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd.	W2D55

5. Heat exchangers, Valves, and Other Auxiliary Components

SN	Product	Company	Booth Location
1	OFC Check and Stop Valve	Danfoss (Tianjin) Co., Ltd.	E2D01
2	GigaForce 4-Way Reversing Valve	Zhejiang	Sanhua Intelligent Controls Co., Ltd.E2D13

3	ZPF200 Electric Butterfly Valve	Zhejiang Sanhua Intelligent Controls Co., Ltd.	E2D13
4	Next Generation Butterfly Valve JR Actuator	BELIMO Automation (Shanghai) Co., Ltd.	E4H10
5	Danfoss Industrial Refrigeration Motor Valve ICMTS and Actuator ICAD B for Transcritical CO2 System	Danfoss (Tianjin) Co., Ltd.	E2D01
6	High Strength Micro Channel Heat Exchanger	Sanhua (Hangzhou) Micro Channel Heat Exchanger Co., Ltd.	E2D13

6. Control Equipment and Systems

SN	Product	Company	Booth Location
1	“PLC+ Intelligent Control” Double Engine Drive Refrigeration Unit Efficient Intelligent Control Management Platform	Moon Environment Technology Co., Ltd.	E1D13
2	M-Master Optical-Thermal-Flexible Control System	Shanghai Kong Intelligent Building Co., Ltd.	W3F25
3	Hisense ECO-B Smart-building and Energy Management System	Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd.	W2D55
4	LynkrOS Intelligent Building System Based on Swarm Intelligence	Lynkros Technology(Beijing) Co., Ltd.	E1D43
5	Jingchuang ECO2 Cloud Computing Energy-saving Control System	Jiangsu Jingchuang Electronics Co.,Ltd.	E1E21

7. Industrial and Commercial Refrigeration Equipment and Related Parts

SN	Product	Company	Booth Location
1	-95 °C Ethylene Ultra-low Temperature Lamination Unit	Bingshan Refrigeration & Heat Transfer Technologies Co., Ltd.	E1F01
2	6-cylinder Transcritical CO2 BOCK® Compressors HGX56 CO2 T	BOCK Compressors (Suzhou) Ltd. (Member of the Danfoss Group)	E2D01
3	NUD125FSC Intelligent Ultra Efficient Light Commercial Variable Frequency Compressor	Changhong Huayi Compressor Co., Ltd.	E2F07
4	SCE 23/25 Stretch	Secop Compressors (Tianjin) Co., Ltd.	E2B51
5	SPT61 Series Semi-hermetic CO2 Reciprocating Compressor	Fujian Snowman Co., Ltd.	E3G43
6	VFLN Series Ultra Efficient Variable Speed Compressor	Huangshi Donper Compressor Co., Ltd.	E2D57
7	Vehicle Mounted Miniature DC Variable Frequency Compressor	Anhui Meizhi Compressor Co., Ltd.	W3F55
8	Sub-critical CO2 Compressor	BITZER Refrigeration Technology (China) Co., Ltd.	E2G01

8. Industrial Heat Pumps

SN	Product	Company	Booth Location
1	105K+ Large Temperature Rise Steam Heat Pump Centrifugal Compressor	Moon Environment Technology Co., Ltd.	E1D21
2	SQ Series Centrifugal High Temperature Water Source Heat Pump Unit	Johnson Controls-Hitachi Wanbao Air Conditioning (Guangzhou) Co., Ltd.	W2F61
3	GEA RedGenium V XHP Heat Pump	GEA Process & Equipment Technologies (Suzhou) Co., Ltd.	E2C27
4	Dual-Stage Cascade Centrifugal Heat Pump	Dunham-Bush (China) Co., Ltd.	W2F41

9. Addressing Climate Change and Other Products

SN	Product	Company	Booth Location
1	DST Gxxx-A2L Gas Sensor	Danfoss (China) Investment Co., Ltd.	E2D01
2	HCs Natural Working Medium Cascade Refrigeration Unit	Moon Environment Technology Co., Ltd.	E1D13
3	Stirling Waste Heat Generator Sets	Sonyo Refrigeration (Dalian) Co., Ltd.	E1F01

First Look at Midea Building Technology to Unveil CRH 2024

The 35th CR Expo is about to be solemnly held in China International Exhibition Centre (Shunyi Hall) Beijing in April 8-10th as one of the largest specialized expo in the worldwide HVAC-R sector, during the CRH, Midea Building Technology will, as smart building integrated solution supplier, make their debut during the CRH along with its multiple product brands, such as MDV, KWING, KONG Smart Building, and all-round exhibit the different application scenarios of professional solutions inclusive of multi-split air-conditioners, chillers and building automatic control products

Diversified products matrix debut their strength

During the CRH, Midea Building Technology booth

sets up two booths: brand exhibition area and industrial application areas, wherein the former covers three brands: MDV, KWING, KONG Smart Building, which shows Midea Building Technology abundant and diversified business line with its true strength.

MDV is commercial multi-split professional brand under the Midea Building Technology. It finds the balancing point amongst being comfort, smart and low carbon via continuously learning the architectural space features and sustainably optimized operation.

As the professional chiller brand, KWING, by virtue of its independent R&D technology, dedicates to offering efficient and professional heating solution to empower

Midea 楼宇科技

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2024
中国制冷展

时间: 04.08-04.10
地点: 北京国际展览中心
展位: W3F25

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核心业务-暖通空调/数智电梯/楼宇自控/能源管理

every demanding sectors to make possible low carbon operation in long run.

KONG Smart Building persists in the mission of making the building smart, and it works harder at innovative practices in the smart building via offering full life cycle service ranging from building automatic control system and intelligent design and construction, clean project, digital intelligence and double carbon consulting etc., which could not only bring new life to the building, but in service of the life itself leading the China building auto control industry in making new development.

The specialized refrigeration and heating equipment is high in technical threshold, along with a number of challenges in O&M. During the CRH, Midea Building Technology will make maiden debut on its digital intelligence service system. In response to the diversified demand of different industrial users, Midea offers customized exclusive service solution covering equipment repair and maintenance, parts and consumables supply, low carbon and energy-efficiency upgrade, smart O&M and full life cycle service solution, which dedicates to offering each customer with more reliable, steady, healthy, comfortable, low carbon and energy-efficient, convenient and intelligent after-sales experience.

Empowering every demanding sectors with low carbon green transformation

In the context of empowering every demanding sectors with low carbon green transformation double carbon goal, the building energy saving and emission reduction still has a long way to go. Midea Building Technology vigorously embraces and explores green future, and continues to customize every sector with efficient, green and intelligent building solution. Midea multi-series products could be found in various scenarios as 2022 Beijing Winter Olympics venue, Shanghai Tongji Hospital and ARANYA Jinshanling scenic spot, making possible of empowering the building with sci-tech in its true sense.

During the CRH, Midea Building Technology will erect industrial application area to all-round exhibit its product solutions and application cases in the commercial real estate, industrial and agricultural sector, medical sector and rail transit etc.

During 2024 CRH, Midea Building Technology will restart with newly gained momentum. Whilst exhibiting multiple product solutions, inject new vigor into the HAVC industry development. Locate the Midea Tuinding Technology booth at W3F25 China International Exhibition Centre (Shunyi Hall) Beijing in April 8-10th to witness more wonderful events.

Hisense Central Air Conditioning Full-Scenario Solution Officially will Debut at CRH 2024

Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd. was established on January 8, 2003. It was jointly invested by Hisense Group and Johnson Controls Hitachi Air Conditioning in Qingdao. It a large-scale joint venture integrating technology development, product manufacturing, marketing, and user services for commercial and household central air conditioning system. For more than 20 years, Hisense Hitachi has maintained a compound growth rate of 25%, with sales exceeding 22 billion yuan in 2023. It has consolidated its position as a leading central air-conditioning company with its hard-core strength, leading the high-quality development of the industry.

As the benchmark brand of Hisense Hitachi, Hisense Central Air Conditioning adheres to the original green and low-carbon responsibility, and uses green, efficient, and energy-saving HVAC system solutions and energy management solutions for buildings to save energy and reduce emissions, providing global customers with low-carbon, energy-saving, and healthy air solution with full life cycle.

At this refrigeration expo, Hisense’s full-scenario central air-conditioning solution will be unveiled W2D55, sharing the latest results with industry partners and working together for the future of the industry!

ECO-B smart building system will be unveiled. Hisense digital intelligence empowers green transformation

At this refrigeration expo, Hisense ECO-B smart building management system will be fully unveiled. ECO-B smart building management system integrates Hisense Hitachi's advantages in the field of HVAC and Hisense Group's advantages in building and energy intelligence to achieve the comprehensive solutions integrating VRF, chillers, heat pumps, fresh air, elevators, photovoltaics, and energy storage, providing users with air management, energy management, operation and maintenance management and other solutions to reconstruct future buildings.



Star HVAC products empower low-carbon and energy-saving future

As a masterpiece of high-end oil-free centrifugal products independently developed by Hisense Central Air Conditioning, the positive pressure liquid floating oil-free variable frequency centrifugal chiller will be officially unveiled at this refrigeration expo to showcase Hisense central air conditioning's sci-tech innovation strength as a national brand that develops compressors independently and masters the "positive pressure liquid floating oil-free" technology.

In addition to large-scale chiller equipment, Hisense Central Air Conditioning will also exhibit products such as M2 and M3 VRF series and purification combined air-conditioning boxes, demonstrating Hisense central air conditioning's new achievements in the direction of low-carbon and energy-saving products.

Full-scenario solutions help sustainable social development

Relying on the full-category product lineup, customized solutions and full-life cycle services, Hisense Central Air Conditioning comprehensively deploys public utilities, infrastructure, industrial and agricultural production, commercial services, real estate development and other scenarios according to different conditions in each region, forming complete product solutions, marketing promotion plans, and service support plans. At CR expo, visitors will experience Hisense's green, energy-saving and smart solution capabilities one by one.

At the same time, Hisense central air conditioning will exhibit its full healthy air solutions for household this time, a one-stop service that meets the air demand of all scenes, delivering high-quality and healthy air to more families and various areas of society.



Hisense central air conditioning has always adhered to the long-term strategy of focusing on users' needs and is committed to using technological innovation to bring more new technologies and products to more industries and users.

Hisense central air conditioning looks forward to your visit!

[Warm-Up] Zhongguang Electrical Appliance Group Will Make a Grand Appearance at CRH 2024 (Beijing)

Zhejiang Zhongguang Electrical Appliance Group was founded in 2006. It is a national high-tech company with heat pump technology as its core, integrating the research and development, production, sales and service of air source heat pumps, heat pump air conditioners, water purification, fresh air, intelligence, and other products, which owns brands such as Zhongguang Outes, Kalaoni, and IK. As a "strategic partner of China's aerospace industry", Zhongguang Electrical Appliance Group has been deeply involved in the industry with heat pump technology as its core for 18 years and has a sound reputation in the upstream and downstream of the industrial chain.

On April 8, the three-day 35th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing will be held grandly at the New Hall of the China International Exhibition Center (Shunyi Hall) in Beijing.

Zhongguang Outes will bring its full range of products to the exhibition, including household and commercial heat pump air conditioners (heat pump, unitary heat pump,

VRF heat pump, and floor heating heat pump), heat pump heating unit, heat pump water heaters, heat pump water heating machine and household and commercial water purifiers and fresh air fans, to provide the visitors with high-efficiency, energy-saving, green and intelligent advanced technology in heat pumps and innovative new products, demonstrating its professional heat pump+ solutions and comprehensive strength.

In recent years, Zhongguang has continued to innovate in research and development, deeply exploring the ultimate potential of "Heat Pump+", opening up a new era of the fourth "pole" in the HVAC track, the heat pump system, and officially launching the "Heat Pump+ global strategy" in 2023. We have been vigorously developing the domestic market, while integrating resources to accelerate the global market layout.

At this expo, in addition to commercial heat pump air-conditioning heating and cooling wide-ranging variable frequency units suitable for extremely cold weather, in addition to the star products such as the "Zhiku A" series of commercial VRF heat pump air conditioners,





the "Yunjing" series of super VRF central and the "A9 Yangwang" series of household heat pump, Zhongguang Outes will also exhibit many blockbuster new products such as magnetic levitation units, light commercial side-blowing water heaters, and the "Feifan" series of triple-generation products, as well as overseas products such as the R290 dual-blade all-in-one machine will also be on display.

In addition, Zhongguang will set up a special exhibition area at its booth for Wuhengjia system and a special exhibition area for triple-generation system to display its rich product ecology in an all-round and multi-angle manner, bringing a hard-core technology experience to

the visitors.

From April 8th to 10th, we look forward to meeting you at booth F25 in Hall W2 of the New Hall of China International Exhibition Center (Shunyi Hall) in Beijing. We will have a 480-square-meter showcasing all-category products from Zhongguang Outes. We sincerely look forward to meeting our major merchants and customers at the exhibition for negotiation and exchange, to experience the "ultimate" charm brought by Zhongguang Outes on site.

Follow Zhongguang Outes' WeChat and official Tiktok account for more exciting news!



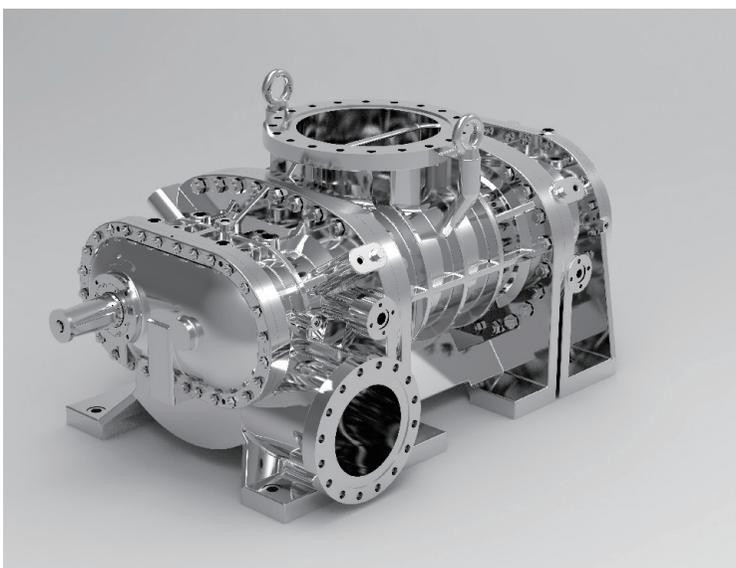
MOON-TECH Environmental Technology Co., Ltd. Will Exhibit at CRH 2024 (Booth No. E1D31+E1D21)

MOON-TECH Environmental Technology Co., Ltd. (stock code: 000811), founded in 1956, is a diversified and international comprehensive equipment industry group. The main business covers low-temperature refrigeration, central air-conditioning, environmentally friendly heating, energy and chemical equipment, precision castings, hydrogen energy equipment, digital intelligence services and other industrial clusters.

MOON-TECH Environment takes the balanced development of heating and cooling conditioning and expanding energy-saving and environmentally friendly industries as its development strategy. It adopts a more low-carbon approach to provide optimal temperature and pressure conditions for users in various industries around the world. Focusing on the temperature control and energy efficiency management on food refrigeration and intensive processing, chemical process cooling, ice and snow venue construction, comfortable environment air-conditioning, urban pipe network energy-saving heating, industrial waste energy utilization, food and

pharmaceutical freeze-drying, temperature control for scientific research, wind tunnel simulation, pressure increasing and liquefaction of process gas, construction aggregate cooling, frozen soil exploration, waste treatment and other fields, MOON-TECH has provided users with life-cycle service guarantees for products in more than 120 countries and regions around the world.

Relying on its complete R&D innovation and intelligent manufacturing system, MOON-TECH Environment conducts research on the comprehensive utilization needs of cooling, heating and heat dispatching and energy recovery in various industries, and improves multi-source and multi-level energy comprehensive utilization system solutions in the industrial field. After winning the gold medal in the heat pump category at the China Refrigeration Expo 2023, MOON-TECH Environment brought a full range of heat pump, the "excellent + equipment" to the China Refrigeration Expo 2024, including screw heat pump units, centrifugal heat pump units, absorption heat pump (refrigeration) units, steam



Large capacity and high pressure ratio screw steam compressor

booster unit, etc. MOON-TECH provides comprehensive utilization services of industrial waste heat in different scopes, different processes, and different displacements for the corporate users, realizing step-by-step utilization and recycling of heat for heating, heat for refrigeration, and heat for power generation.

Under the environmental policy of "harmonious coexistence of man and nature", MOON-TECH Environment is actively committed to the promotion and application of green and environmentally friendly working fluids. At this expo, MOON-TECH Environment will show the visitors the 20-year iterative upgrade path of refrigeration equipment with environmentally friendly working fluid. Through the widespread promotion and application of various types of environmentally friendly working fluids such as carbon dioxide, ammonia, and propane in various industries, and the digital upgrade of the dual-engine driven efficient intelligent control management platform, MOON-TECH Environment has helped more partners achieve dual improvements in economic and social benefits.

MOON-TECH Environment is committed to providing users with professional, high value-added smart energy comprehensive utilization solutions. Welcome to E1D31+E1D21 of MOON-TECH Environment. Let us explore the low-carbon road to green and sustainable development.

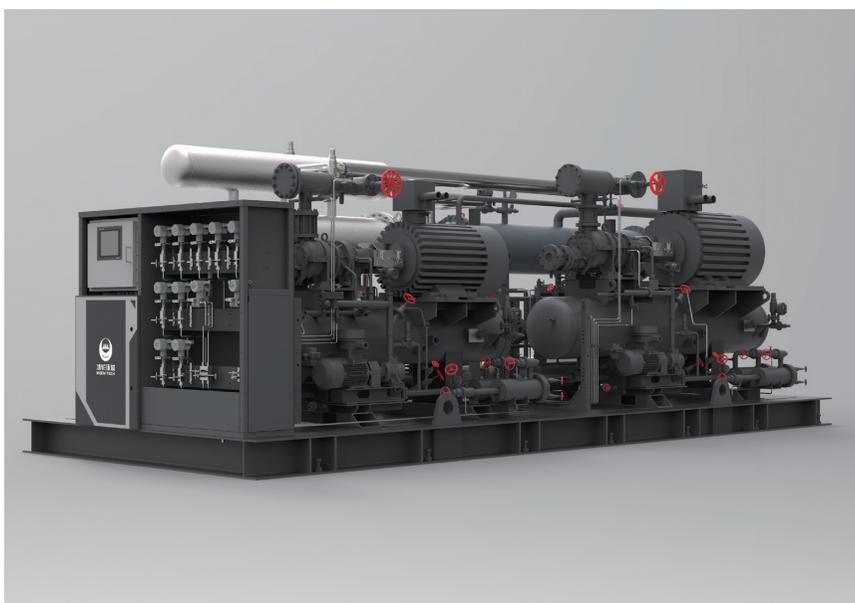
Contact:

Liu Fulai, Market Development Department, MOON-TECH Environment

15098566609, 0535-6277341

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Cascade refrigeration unit with HCs natural working fluid

TICA will Exhibit at CRH 2024

TICA, founded in 1991, has always adhered to the development strategy of “two business sectors for one environmental protection path”. In the process of corporate development, TICA pays attention to environment, social and governance (ESG), and always practices the concept of sustainable green development. At this expo, TICA will set up six core exhibition areas of “Clean Area”, “Heat Pump Area”, “Comprehensive One-stop Solution Area”, “Household Area”, “Energy Area” and “Brand Display Area”, showcasing TICA's high-quality international development results in recent years.

■ TICA's booth:

Booth No.: W2F11

Booth area: 24 m×16 m=384 m²



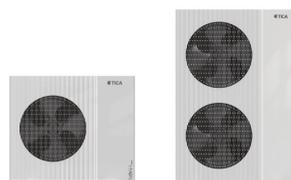
TICA booth

1. Heat pump area

Representative product: NOAH air source heat pump (water chilling) packages

TICA NOAH air source heat pump (water chilling) packages is a product launched by TICA on its basis of high-quality development model. It adopts new R290 environmentally friendly refrigerant technology, with lower GWP, SCOP rigidity value as high as 5.0, and more efficient and low energy consumption. Silence and comfort are also the outstanding features of the product. Its multiple noise isolation measures can reduce the noise of the outdoor unit to below 36 dB (A). Its outlet water temperature is as high as 80 °C, allowing users to enjoy the surging warmth even in the cold winter. This advanced product is designed mainly for the European market currently. It is particularly suitable for places with

efficient heating in winter, strong cooling in summer, and cooling and heating in transition seasons.



NOAH air source heat pump (water chilling) packages

TICA NOAH air source heat pump (water chilling) packages, integrating cold, warm and hot water applications, can be connected to photovoltaic power generation and solar heating systems. Users view and manage the operation of the energy system in real time through the mobile APP, truly achieving intelligent management of home energy, providing high-quality choices for people pursuing a comfortable and environmentally friendly lifestyle.

2. Clean area

Representative product: New generation TBF group air equipment (Jingyun)

This TICA's product adopts a "labyrinth sealing structure" with an air leakage rate as low as 0.029%, which is 35 times higher than the national standard. It solves the industry's pain points and has become a national-level individual champion product. Its full frequency conversion + heat recovery technology, achieving an energy saving rate up to 55%.

3. Comprehensive one-stop solution area

This exhibition area combines "5" TICA green transformation undertakers, the brand products of TICA Group including TICA Environment, Fujia, SMARDT, Fujia Tuyu, and Guanfu, using "1" IoT data energy saving credibility platform, to provide customers with comprehensive one-stop solutions.



New generation TBF group air equipment (Jingyun)

4. Household area

Representative product: TICA Total Effect Air Ecosystem

TICA's full-effect air ecosystem applies TICA's "industrial clean black technology" with 32 years of history to a healthy living environment, creating customized and standardized 5-constant health system for consumers based on a healthy and comfortable ideal living environment. The health system is a smart home central air-conditioning system with "constant temperature, constant humidity, constant oxygen, constant cleanliness, and constant quietness". During this refrigeration expo, the "5 Radiation -Constant System, 5-Dimensional Climate Expert" will be newly launched, dedicated to bringing suitable temperature, clean air, and quiet home environment to users. It is developed for various scenarios such as high-end villas, large flats, maternity centers, wellness centers, and specialty B&Bs.



Household products

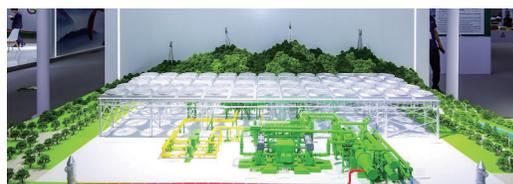
5. Energy Area

On the road to promoting the "3060" carbon emission peaking and carbon neutrality emission goals, TICA Energy takes "full spectrum medium and low-temperature power generation" as the core of its strategy. During the refrigeration expo, TICA will set up a special

"Energy Zone" to focus on the utilization of renewable energy, namely the medium and low temperature power generation technology and the organic Rankine cycle technology independently owned by TICA Energy.

As a global enterprise in the field of medium and low-temperature power generation technology, it has successfully applied this technology to the polyester industry in China. It is an excellent brand in waste heat utilization in the field of chemical fiber, and has solid foundation and mature experience in promoting the technology to a wide range of waste heat utilization fields in other industries such as oil refining, metallurgy, glass, cement, and papermaking.

In addition, during the expo, there will be release activities, live broadcast activities, check-in activities and many other exciting displays on site.



Sand table model of geothermal power generation system

About TICA

TICA, founded in 1991, has always adhered to the development strategy of "two business sectors for one environmental protection path". It has formed a professional air environment process business segment with TICA Environment as the main body and a green renewable energy business segment with TICA Energy as the main body. The former focuses on the field of air extreme environments and energy-saving applications of building refrigeration systems, and has won the national single championship in the industry. The latter is engaged in six major energy markets including geothermal (hot dry rock) power generation, industrial waste heat power generation, LNG cold energy power generation, biomass energy, photothermal power and energy storage, etc., achieving a global installed capacity nearly 1,000 MW.

Hot and Cold Coupling, Digital Carbon Reduction

—Bingshan Group's smart and green solutions, focusing on heating and cooling, will be unveiled at the CRH 2024

At China Refrigeration Expo 2024, Bingshan Group will showcase a series of new technologies, products, and solutions for energy saving and carbon reduction around the theme of "Heat and Cold Coupling, Digital Carbon Reduction" to contribute "Bingshan's Solution" to "Green China".

Save energy and reduce carbon, to create value for customers

At this refrigeration expo, Bingshan Group will display its gas-electric hybrid heat pump units, the Stirling waste heat generator units that provide four-in-one comprehensive solutions for refrigeration, heating and power generation, Bingshan CO₂ five-in-one integrated cooling and heating system for Ice Rink that achieves energy savings of more than 50%, CO₂ transcritical air-cooled condensing integrated unit that improves overall energy efficiency by 30%, ethylene/propane low-temperature cascade cryogenic unit, open-type process gas compressors used for CCUS, natural gas MRC, coal bed methane, rock formation methane pressurization, and BOG gas industrial recycling and other industries, explosion-proof local refrigeration devices for mines that can adapt to high condensation pressure environments, red water all-in-one machines that save 37% of water and 40% of electricity, parallel flow intelligent continuous quick freezing device achieving unmanned operations in the field of refrigeration, DM all-steel cooling tower that saves 60% energy in the air conditioning field and other energy-saving and carbon-reducing products.

Lead the way in reaching carbon emission peaking and carbon neutrality and support clean energy supply. In recent years, relying on its heating and refrigeration technology, Bingshan has achieved multi-energy synergy of electricity, cold, heat, gas, hydrogen, and carbon according to the green energy needs of different scenarios. At this exhibition, Bingshan will showcase

the Bingshan clean energy ecosystem, which includes comprehensive solutions for fossil energy clean supply chain, new energy supply chain, industrial clean energy, food processing clean energy, and commercial clean energy, providing typical cases as an active participant in zero-carbon transformation and digital transformation of the energy industry, promoting the development of new clean energy models and new business formats.

At this expo, Bingshan will also display a full range of scroll compressors that meet the needs of different market segments such as refrigeration, industrial chillers, air conditioners, heat pumps, energy storage, and vehicles. Among them, the medium-temperature fixed-frequency 50 HP large scroll compressor can be applied to typical low-temperature scenarios such as cold storage, supermarkets, medical care, and food industry. The natural working fluid R290 DC variable frequency scroll compressor has a heating capacity ranging from 9 kW to 25 kW, achieving a low evaporation temperature of -35 °C and a high output water temperature of 75 °C. The product has obtained 2 invention patents and 3 utility model patents.

Digital empowerment reduces costs and increases efficiency for customers

At this exhibition, Bingshan will showcase its new solutions for digital energy conservation. The newly launched Bingshan intelligent industrial heating and cooling control system solution, the energy storage control system, with the characteristics of adjustable energy capacity, efficient intelligent control, safety shield, exquisite modularity, high cost performance, etc., saves 50% of wiring time and reducing 50% of cost.

The iteratively upgraded Bingshan energy visualization management platform includes three modules, the intelligent collection of energy consumption data,

statistical presentation of energy consumption data, and energy consumption data analysis, realizing automation, integration, and visualization from collection to summary analysis. The platform is able to predict future energy consumption trends based on energy planning, production capacity planning, historical data and other contents, and can be applied to cold chain logistics, food processing and other industries.

In addition to the on-site exhibition, Bingshan's expert engineers will also be invited to conduct technical exchanges at the exhibition on cold chain, heat pump, carbon emission peaking and carbon neutrality, refrigeration and air conditioning, residual pressure and waste heat and other fields.

Welcome to visit Bingshan's Booth E1F01 at the China International Exhibition Center in Beijing (Shunyi Hall) from April 8th to 10th, 2024. Welcome to follow Bingshan Group's WeChat public account and official Tiktok account, bingshan1930. We look forward to meeting you!



Let Temperature Better Serve Life and Let Service Be Higher Than Temperature

(Yantai AOWID Refrigeration Equipment Co., Ltd., Booth No. E1D27)



From April 8th to 10th, focusing on green, low-carbon and technological innovation, AOWID Refrigeration will make a grand appearance at the China Refrigeration Expo 2024 with a number of new products and new technologies. We sincerely invite you to participate in the event and shape the future together.

Yantai AOWID Refrigeration Equipment Co., Ltd. is a technology-based enterprise integrating complete services of refrigeration technology R&D, product design and manufacturing, refrigeration system application, and installation. The company is located in Qinshui Industrial Park, Muping District, Yantai City, Shandong Province. The company covers an area of more than 100,000 square meters and a construction area of 52,000 square meters. The company focuses on the R&D and manufacturing of industrial and commercial refrigeration equipment and technology and provides customers with overall system solutions. AOWID's products cover CO2 complete refrigeration systems, intelligent box freezers, spiral cooling and freezing equipment, refrigeration screw compressors, air coolers, evaporative condensers,

and cold chain logistics access control series, serving the fields of agricultural and sideline products, meat products, frozen deep processing of aquatic products, condiments, food and beverages, and cold chain logistics.

The company follows the national development strategy of "green, low-carbon, environmental protection, and sustainable development", takes "saving energy and costs, protecting the environment and resources, and creating safe and efficient products" as its R&D and design philosophy, and adheres to the path of high-end and integrated development, achieving the intelligent, digital, and informatized matrix of products and systems. It uses new CO₂ refrigeration technology to tailor stable, reliable, energy-saving, environmentally friendly, and simple-to-operate refrigeration system solutions for global customers, providing one-stop value-added services.

The following is an introduction to some of the exhibits at this refrigeration expo.

Product: CO₂ semi-hermetic screw compressor unit with adjustable internal volume ratio

- ◆ Adopts four-stage permanent magnet variable frequency motor, runs at low frequency during defrost and at high frequency during normal cooling, ensuring motor safety, more accurate load matching, and better efficiency on energy saving.
- ◆ Adopts variable frequency energy regulation method, with light starting load and small starting current, achieving little impact on the power grid.
- ◆ The internal volume ratio is stepless and continuously adjusted, which can adapt to different operating



conditions and reduce the power consumption of the compressor.

◆ The refrigerant liquid thermosiphon cooling motor has good effect, and the COP is about 3% higher than that of traditional suction cooling motor.

Product: Series-parallel switchable dual-machine two-stage screw refrigeration compressor unit

◆ It realizes parallel operation in the high-temperature section of the system. The high and low voltage stages are heated together; the temperature drops quickly through the large displacement. At the end of the high-temperature section, when the low-pressure stage can run at full load, the system switches to the economical series operation, matching high and low voltages.

◆ Both high- and low-pressure stage compressors adopt adjustable internal volume ratio, which reduces over-compression and under-compression, making the system more energy-saving.



◆ In the process of stepless and continuous adjustment of the internal volume ratio, the compressor is always at full load and there is no need to reposition the two slide valves.

◆ The control mode is automatic, with single-stage parallel and double-stage series switching modes.

Product: Slide rail spiral cooling and freezing equipment

◆ The mesh belt adopts a special structure for fastening and matching, which mechanically solves the belt turning problem of the spiral single freezer.



◆ No rotating cage, making the internal space easier to clean and inspect.

◆ Achieves single-spiral low-end purchase and low-end shipment, realizing a variety of inlet and outlet layouts.

◆ Adopts PLC automatic control + manual control to ensure stable operation of the equipment.

◆ No tensioning device is required, which not only reduces failure points but also prevents damage to the mesh belt caused by over-stretching.

◆ Suitable for aquatic products, meat, fruits and vegetables, prepared foods, etc.

Welcome to the AOWID Refrigeration at booth No. E1D27 for details of other exhibits. In the future, AOWID will continue to adhere to the brand strategy, careful design and fine manufacturing, to develop products with advanced technology, meeting customer and market demand. The company is willing to work with friends at home and abroad to create a better future.

Innovating the Future with Heat Pumps McQuay's Grand Appearance at CRH 2024



As an outstanding brand in China's HVAC industry, McQuay strives to be the "tough tree" in the "strong wind" of the market, always keeping up with the technological changes in the industry market and continues to release the company's new products and new technology through the China Refrigeration Expo, one of the three major exhibitions in the world.

From April 8 to 10, 2024, McQuay will present a full range of all-scenario heat pump products and solutions with the theme of "Inheriting Centennial Technology, Innovating the Future with Heat Pumps" at the 35th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing Packaging and Storage (referred to as "China Refrigeration Expo 2024") to consolidate its technological leadership in the field of heat pumps.

The global energy crisis is becoming increasingly prominent. As the policy on carbon emission peaking and carbon neutrality continues to advance, heat pump technology is increasingly popular in China. McQuay has long adhered to R&D innovation and focused on industry demands. It has established the most complete product matrix for a full range of heat pump applications in the industry. Following the industry's green and low-

carbon development direction, it has developed high-temperature heat pump hot water heater technology, replaced boiler combustion heating, and built a comprehensive solution in the heat pump field. The industrial ecological chain deeply empowers thousands of industries to achieve energy conservation and carbon reduction in HVAC.

7 heavyweight real machine products

McQuay has attended the China Refrigeration Expo for 15 consecutive years. The company adheres to the new product strategy of "half a step ahead" and provides the market with a steady stream of new products and technologies. The actual products such as the centrifugal, screw heat pump units, R32 variable frequency ultra-low temperature series scroll heat pumps, four-pipe heat pumps, household heat pump triple generation, ground source heat pumps, three-pipe direct expansion heat pump heat recovery air handlers will be exhibited at the expo.

It is worth mentioning that McQuay's strong product lineup on display all uses new refrigerants and new energy-saving technologies, demonstrating McQuay's

profound energy-saving technology heritage, as well as attitude and determination to promote energy conservation, respond to climate challenges, and restore a green planet.

4 major application scenario solutions

Focusing on the display concept of "full-scenario and full-series heat pump solutions", McQuay brings a series of innovative technology products based on the application characteristics of four major fields, including industrial high-temperature heat pumps, large commercial heat pumps, medium and large commercial heat pumps, and small household heat pumps. Its multi-faceted industrial heat pump solutions facilitate the industry's low-carbon transformation and upgrading.

4 in-depth exchange meetings on industry technology

At this exhibition, McQuay will hold live broadcasts and on-site technical exchange activities, using new

media platforms to conduct extensive interactive exchanges on "HFO new refrigerant multi-stage compression centrifuge technology", "Application of air-side purification and dehumidification technology in the industrial field", "Low ambient temperature air source heat pump heating technology", "Application of industrial high-temperature hot water technology" and other topics. We sincerely invite you to discuss the technological development of the HVAC industry.

McQuay looks forward to meeting you at booth No. W2F33 from April 8 to 10.



Sanhua Will Bring Various Innovative Products to CRH Welcome to Celebrate Sanhua's 40th Anniversary!

China International Exhibition Center (Shunyi Hall)
Beijing No. 88 Yuxiang Road, Shunyi District

Exhibition time: April 8 to 10, 2024

Sanhua's Booth NO.: E2D13

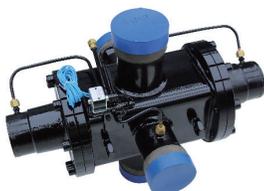
(Booth area 13 m×16 m=208 m²)

This year marks the 40th anniversary of Sanhua's founding. The group will carry out a series of celebration activities. As an international communication platform, the China Refrigeration Expo is an important stop of the celebration. Sanhua will present various innovative products as a gift to the group's 40th anniversary. We sincerely invite you to witness it!

1. More than Big

GigaForce square four-way valve (SHF-GF series)

It is suitable for air-cooled screw units of 60~200Rt. The square design is used to solve the sticking problem (of the cylindrical valve body structure in the market) and the internal leakage value is halved.



ZPF electronic expansion valve (electric butterfly valve)

It is suitable for centrifuges below 1 800Rt. The flow adjustment part adopts a butterfly valve design and uses a stepper motor to drive the valve disc to rotate, achieving 9,600 steps of high-precision adjustment.

The ZPF electronic expansion valve solves the stuck



GSV stop valve for industrial refrigeration

problem of electronic expansion valves with the same cooling capacity in the market through its new design. It can achieve a cycle life of 150,000 times (each cycle = 19,200 steps) even in an oil-free environment, and is suitable for magnetic levitation, air suspension and other oil-free systems.

After forty years of development, Sanhua has gradually expanded its business from household products to the commercial field, and now it has entered the industrial field. The most representative product is the GSV industrial stop valve. Sanhua will launch a series of industrial stop valves, for two platforms. The maximum working pressure of GSVL reaches 40 bar, which is suitable for NH₃, HFC, propane and propylene, etc. The GSV industrial shut-off valve increases the maximum operating pressure to 65 bar and is compatible with CO₂ systems. GSV industrial stop valves cover a full range of nominal diameters from DN6 to DN200 and adopt forged valve bodies to eliminate leakage at the source.



Its patented sealing ensures triple protection, achieving extreme stability.

2. Integrated cold source system solution for cold storage

The "integrated cold source system for cold storage" is a solution created by Sanhua and the Cold Storage Technology Alliance for the small and medium-sized cold storage industry. The new digital cold storage controller "CoolMa" developed by Sanhua will be launched simultaneously. The high-efficiency cold storage equipped with intelligent system, is the culmination of Sanhua's 30 years of cold storage application experience. Together with Sanhua's "WITNESS" central monitoring system, the "digitization" of the cold storage system is truly realized.



3. Increasingly abundant CO2 product family

Various new CO2 products will be unveiled for the first time. Stay tuned!



4. Platinum LINE (Platinum Series)

Through the continuous innovation of materials and processes, more and more all-stainless steel products will be launched. The carbon emissions of all-stainless steel valves in the entire life cycle will be significantly lower than that of brass valves. As a high-end image representative of Sanhua, they will "shine" for the overall system.



5. High-efficiency heat exchange technology

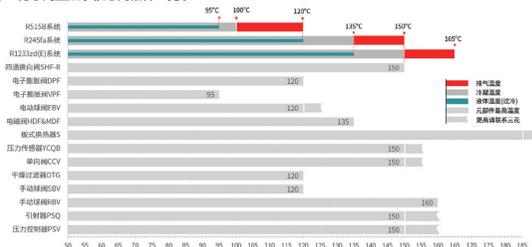
Sanhua will continue to show its innovative achievements in micro-channel heat exchangers and plate heat exchangers. In the field of energy storage thermal management, Sanhua will launch S27C (6~8kW) and 95C series (40 kW) plate heat exchangers for liquid cooling systems, which will significantly reduce the flow resistance on the ethylene glycol side. On the battery side, a more efficient micro-channel liquid cooling plate will be launched.



6. High temperature/steam heat pump solution

In the field of heat pump, Sanhua will focus on the future-oriented R290 solution. At the same time, in the industrial field, Sanhua will launch a series of product combinations for high temperature/steam heat pumps for R515B, R245fa and R1233zd(E), with a maximum temperature resistance of 150 °C.

三花@高温热泵核心元器件一览表



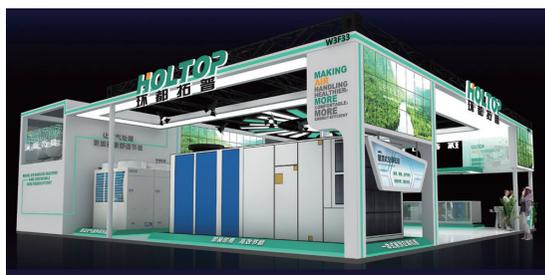
HOLTOP's Exhibition at CRH 2024 (Booth No. W3F33)

Founded in 2002, HOLTOP is a well-known domestic manufacturer of healthy and energy-saving air treatment equipment, a Zhongguancun high-tech enterprise, a national high-tech enterprise, and a "professional, specialized and innovative" enterprise. HOLTOP pioneered the "four-dimensional architectural concept" and redefined healthy, energy-saving and comfortable air treatment methods. At this expo, focusing on fresh air and air-conditioning system solutions, HOLTOP will showcase leading energy-saving technologies and continuously innovative fresh air and air-conditioning products.



HOLTOP's booth number is W3F33. During the exhibition, HOLTOP will mainly display its core air heat exchangers, fresh air and air conditioning products. Products such as runner heat exchangers, U-shaped heat pipe heat exchangers, and 3D counterflow heat exchangers displayed in the heat exchanger area, with outstanding energy-saving effects, are widely used in various air treatment fields. The fresh air area mainly shows export series, such as Oufeng style series, Oushang series, wall-mounted series, cabinet series and other best-selling export products. The sales of HOLTOP's fresh air products in foreign countries have been showing a rising trend.

The air conditioning area is the highlight of the HOLTOP's exhibition, focusing on the integrated rooftop unit, low-temperature air source heat pump unit, three-pipe constant temperature and humidity unit and condensation exhaust heat recovery fresh air unit.



HOLTOP condensing exhaust heat recovery fresh air unit is an energy-saving air conditioning product. The unit adopts plate-fin full heat recovery technology and condensing exhaust heat recovery technology to make full use of the energy of the exhaust air, improve the efficiency of the compressor, and improve the energy efficiency ratio, reducing energy consumption caused by fresh air treatment.

HOLTOP's energy-saving concept runs through its every aspect of product design. It continues to innovate products, practices green and low-carbon concept, and uses its core air technology and energy-saving and environmentally friendly products to provide users with high-quality products and services.



Nedfon Will Exhibit at CRH 2024 Make Indoor Air Better

In 2024, with the steady recovery of the global economy, innovation and progress in refrigeration technology have become an important force in promoting green and sustainable development. The China Refrigeration Expo 2024 will be held grandly from April 8 to 10. With the theme of "More Digital Intelligence and Emerging Tracks for Win-win Growth", this expo brings together many domestic and foreign leading enterprises and cutting-edge technologies in the refrigeration field, aiming to promote the high-quality development of the refrigeration industry through innovation and cooperation, and contribute to building a green, low-carbon future society.

As the "first listed fresh air stock" in China, Nedfon will bring a number of innovative designs and innovative technologies to its booth W4D06 at the Shunyi Hall of the China Refrigeration Expo 2024. Guangdong Nedfon Air System Co., Ltd. has been committed to improving indoor air quality and building energy efficiency. Adhering to the mission of "making indoor air better", it has focused on the design, development, production and marketing of indoor ventilation system products for decades. Nedfon always adheres to its driving force, the innovation and development of independent brands, and strives to promote indoor ventilation systems



Guangdong Nedfon Air System Co., Ltd.



New ducted ventilation fan

innovation towards energy conservation, environmental protection, efficiency, intelligence and other directions.

At present, the company's products are involved in fresh air systems, air curtains, ventilation fans, bathroom heaters, fans, building fans, industrial fans and other categories covering hundreds of series and thousands of models. The rich product structure system meets the diverse needs and provides global consumers with ventilation products with leading technology and excellent quality.

At this refrigeration expo, Nedfon will bring a variety of new products such as brand-new ducted ventilation fans and diagonal flow ducted fans. Among them, the new ducted ventilation fan adopts an innovative appearance design and a stylish and simple gray and white color scheme, showing a unique style of beauty. It is outstanding both inside and outside. It is equipped with all-copper double ball bearings and has a built-in independent vortex air duct. Its upgraded performance,

soft sound and low noise, brings comfortable and fresh air to the indoor environment.

Nedfon's new diagonal flow duct fan will be unveiled at the expo, which has a streamlined design and a full sense of technology. The black technology blades, combined with a high-performance motor, achieve strong and stable wind output while operating with low noise. It is equipped with a non-return valve and high-efficiency pressurizing structure, which could effectively prevent air backflow and improve the ventilation effect. It is easy to disassemble and intuitive to install, saving time and effort. It is made of V0-level high flame-retardant plastic, which is safe and reliable. It is an ideal choice for ventilation in the new era.



New diagonal flow duct fan

Nedfon looks forward to exploring the technological development and green future of the fresh air industry with you!

Digital Intelligence Gathers Momentum to Move Forward OBAIR Looks Forward to Meeting You at CRH 2024

The 35th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing (referred to as "China Refrigeration Expo 2024") will be held at Beijing China International Exhibition Center (Shunyi Hall) from April 8 to 10, 2024. With the theme of "More Digital Intelligence and Emerging Tracks for Win-win Growth", 8 major exhibition halls were set this year with an exhibition area of 106,800m². There will be more than 1,000 domestic and foreign companies and institutions participating in the exhibition. It is expected to attract more than 70,000 professional visitors. OBAIR will bring star products to the exhibition to assist the high-quality development of the refrigeration and HVAC industry and bring new vitality to the industry!

In recent years, focusing on using digital technology to drive industrial development, two major advantageous industries have been gradually formed in the manufacturing industry, namely the intelligent manufacturing and high-end equipment, and new-generation information manufacturing. Standing in the new stage of digital economy development, high-tech enterprises represented by OBAIR continue to leverage

the technological advantages to jointly promote the in-depth integration of digital economy and the real economy in the industry.

As OBAIR's product research and development upgrades, its core competitiveness has steadily improved, and customers' personalized needs have continued to improve. OBAIR will bring the latest series of products to customers at this refrigeration expo. High-profile products such as low-dew-point double-wheel dehumidifiers, double U-shaped scroll low-ambient temperature air source heat pump units, air-suspended centrifugal water-cooled chillers, and combined purification air-conditioning units will be unveiled at the booth. A new product launch conference for the low-dew-point double-wheel dehumidifiers will be held during the exhibition. At this expo, OBAIR will display the company's new technologies, new applications, and new concepts to industry visitors, and discuss and communicate with colleagues to share and integrate resources. It is believed that it will bring you a different experience! We sincerely invite you to visit booth W2D41.



THE 36TH INTERNATIONAL EXHIBITION FOR REFRIGERATION, AIR-CONDITIONING, HEATING AND VENTILATION, FROZEN FOOD PROCESSING, PACKAGING AND STORAGE



APR 27-29, 2025 | Shanghai New International Expo Centre

Organizers:

-  Chinese Association of Refrigeration (CAR)
-  China Refrigeration and Air-Conditioning Industry Association (CRAA)
-  Beijing International Exhibition Center Co., Ltd. (BIEC)
-  Shanghai Society of Refrigeration (SSR)
-  Shanghai Air-Conditioning and Refrigeration Institute (SARI)

Supported by:

-  Beijing Chamber of International Commerce (BCIC)

Show Management:

-  Beijing International Exhibition Center Co., Ltd. (BIEC)

