

CR 中国制冷展 2019
CHINA REFRIGERATION

CRH 2019

制冷·空调·暖通
HVAC&R

SHOW EXPRESS

2019
NO. 63

The 30th International Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation,
Frozen Food Processing, Packaging and Storage

April 9-11, 2019
Shanghai New International
Expo Centre, China

2019

CHINA REFRIGERATION EXPO



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Show Management:



A Shared Commitment to Industrial Development Road and New Chapter

-The 30th China Refrigeration Expo will be unveiled in Shanghai

Joint hosted by the China Council for the Promotion of International Trade Beijing Sub-council (CCPIT Beijing), Chinese Association of Refrigeration (CAR), China Refrigeration and Air-Conditioning Industry Association (CRAA), Shanghai Society of Refrigeration (SSR) and Shanghai Association of Refrigeration Industry (SARI), and organized by Beijing International Exhibition Center, the 30th International Exhibition for Refrigeration, Air-Conditioning, Heating and Ventilation, Frozen Food Processing Packaging and Storage (hereinafter referred to as China Refrigeration) will be held on 9th-11th April 2019 at Shanghai New International Expo Center.

With two international recognized certifications from the Global Association of the Exhibition Industry (UFI) and U.S. Ministry of Commerce (US FCS), China Refrigeration is one of the largest refrigeration sector exhibitions in the world. It is a diversified platform supported by internet and formed in display and exhibition with high end forums.

Themed with “Cooperation & Innovation for Development”, China Refrigeration 2019 will gather refrigeration industry enterprises and institutions from 33 countries and regions around the world to create a wonderful event for the HVAC refrigeration and air-conditioning industry. The organizing committee will continue to advocate its “Green Exhibition” concept and fulfill organizer’s social responsibility. China Refrigeration 2019 will inherit its six major characteristics and present three highlights worth looking forward to:

I. Continue to inherit the seven characteristics of China Refrigeration

1. Gather well-known brands and create new products and new technologies

Global leading brands in the industry will gather in China Refrigeration. Exhibits are available in all varieties, from the mainframe to accessories; exhibitors fully display their new technologies and new products.

2. Discuss and exchange via the platform, various ideas interaction in the sector

The organizing committee will hold theme forums and more than 20 symposiums during the exhibition. Exhibitors will also have 30 technical exchanges on the platform to release new products, promote new technologies, and exchange ideas with people from refrigeration industry.

3. Organize professional audiences, high-end users to participate, carry out in-depth exchanges and interactions

Intensify the organization and work of professional audiences, and organize overseas buyers' groups, the Chief Engineers of National HVAC Refrigeration and Air-Conditioning Architectural Design Institutes, and the Freezing and Refrigeration Chief Engineers Observation Group to conduct in-depth exchanges and interactions with exhibitors.

4. Emphasis on intellectual property protection

Intellectual property booths will be set up at the exhibition site, and professionals familiar with laws, intellectual property rights and patents will be invited to work on-site to provide exhibitors with relevant services related to intellectual property disputes. China Refrigeration will strictly review exhibitors’ all qualifications, and also sign a commitment letter on intellectual property protection with each exhibitor. Relevant measures will be taken if exhibitors violate

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rules. It will also update a blacklist of uncompliant enterprises, those on blacklist are prohibited participation.

5. Through open cooperation, gather advantage resources

China Refrigeration always adheres to the concept of open cooperation, and attracts advantage resources at home and abroad via such an international and diversified comprehensive communication platform.

6. Carry out Innovative Products Selection and organize experts to write China Refrigeration Technical Report

As a release window for exhibitors' technological innovation, innovative products selection can fully reflect the latest technological achievements and sector's development direction. China Refrigeration Technical Report aims to provide a summary on products and technologies of this year, analyze the development of the industry, and promote the development and progress of the industry.

7. Combine industry hotspots to create a display area

Though available booth area of China Refrigeration are limited, the organizing committee insisted on setting up a cold chain display area, an ozone climate technology roadshow display area and a heat pump display area to showcase new achievements, publicize new ideas, and fulfill their duties for the development of industry and society.

II. Three highlights empower China Refrigeration innovation

1. Utilize the Internet and big data to improve participation efficiency and practice commitment of green exhibition

China Refrigeration 2019 will fully use the "online application system" to achieve a comprehensive paperless registration process. On the one hand, it will implement the concept of green exhibition; on the other hand, it will facilitate the management of data, and rationally allocate booths and improve the efficiency of exhibitions. The current exhibition butler system allows exhibitors to use mobile APP to easily understand the audience information and the product areas they care about.

2. Strictly control noise and create a good environment

China Refrigeration 2019 will prohibit exhibitors from bringing any audio equipment into the venue, which will purify the exhibition environment, and improve the quality of exhibition environment and participation effect.

3. Refine the layout of the booth and increase the net exhibition area

More than 2,240 exhibitors were registered in China Refrigeration 2019. Under the premise of not affecting the display effect and the regulations of the exhibition hall, the organizing committee redesigned the booth layout to meet the exhibitors' needs. The exhibition's net area exceeds 50,000 square meters for the first time.

The development and expansion of China Refrigeration Exhibition from scale to brand cannot do without the support and help of people from refrigeration industry and the care of the society. The organizing committee will not forget its original intention, and will make exhibitors' and sector's needs and social responsibility as its objectives, to move forward for the future of China's HVAC refrigeration and air-conditioning industry, and create a better living environment for the people.



Meng Qingguo
Secretary General, Vice President
Chinese Association of Refrigeration (CAR)

推动节能、环保、安全，
促进协同、创新、发展。

孟庆国

精诚合作、共谋发展，
打造全球顶级行业盛会

马常俊



Ma Changjun
Deputy Director-General
China Council for the Promotion of International Trade
Beijing Sub-council (CCPIT Beijing)



Zhang Zhaohui
Vice Chairman & Secretary General
China Refrigeration and Air-Conditioning
Industry Association (CRAA)

新起点、新征程、新发展

张肇辉

Congratulation message from ASERCOM



Dear President,
Dear Director, International Division,
Dear Ladies and Gentlemen,

On behalf of the Association of European Refrigerant Component Manufactures ASERCOM, I would like to congratulate the organisers of this year's China Refrigeration Expo 2019 here in Shanghai. We wish our friends and colleagues from CAR, CRAA and the exhibition organizers much success with this year's edition.

It is my great pleasure to share the 30th China International Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage with you.

This is one of my favourite exhibitions as it brings together so many members of our industry from all corners of the world. ASERCOM's relationship with the CAR and CRAA is also symbolic of how cooperation across borders can be mutually beneficial. We are very proud to support the upcoming International Cold Chain Technical Forum with our partners.

In the last 30 years, we are pleased that China Refrigeration Expo has prospered hand in hand with the whole refrigeration industry to bringing significant benefits to worldwide economy. Once again, we would like to wish you on behalf of all ASERCOM members, our warmest greetings and best wishes for the upcoming China Refrigeration Expo. Our association look forward to further strengthen our relationship.

Yours sincerely

Wolfgang Zaremski
President of ASERCOM

Welcome note China Refrigeration



Dear Ladies and Gentlemen,



Dear exhibitors and visitors of China Refrigeration Expo 2019,

On behalf of the European Partnership for Energy and the Environment (EPEE) representing the manufacturers of refrigeration, air-conditioning and heat pump equipment in Europe, I would like to welcome you to China Refrigeration Expo2019.

It is a great honour for EPEE to be present at one of the world's leading exhibitions for the HVAC&R industry. We have a long-standing relationship with the CRAA and once again are delighted to be co-hosting a side event focusing on two key topics - ecodesign trends in Europe and the HFC phase-down in Europe and globally.

Since the last Expo, decarbonisation has become a buzzword in Brussels. In November 2018, the European Commission proposed a decarbonisation plan that would require the EU to achieve net-zero greenhouse gas emissions by 2050 and reduce greenhouse gas emissions by 40% by 2030 (compared to 1990 levels). Meanwhile, on Europe's streets young people have been protesting about the need for governments to prevent climate change, with Swedish teenager Greta Thunberg – one of the main organisers of the protests – receiving media attention and even getting to meet President of the European Commission Jean-Claude Juncker.

Earlier this year saw the official entry into force of the Kigali Amendment regarding the global phase-down of HFCs. This entry into force was dependent on 20 countries ratifying it by 1 January 2019 – that at the time of writing 69 parties have ratified the amendment shows that the global phase-down is being taken seriously.

In EU countries the implementation of the landmark F-Gas Regulation is well underway. EPEE is monitoring progress to ensure that the rules are consistently applied across the 28 (soon to be 27) EU countries.

I look forward to meeting you at this year's Expo and to welcoming you to our side-event. May our longstanding collaboration continue well into the future!

Yours sincerely,

Andrea Voigt
Director General EPEE



Message to the organisers of CR Expo from Eurovent and Eurovent Middle East

On behalf of Eurovent (Europe’s Industry Association for Indoor Climate HVAC, Process Cooling, and Food Cold Chain Technologies), Eurovent Middle East, and the more than 1.000 HVACR manufacturers our organisations represent throughout Europe and the Middle East, we would like to congratulate the CR Expo organisers on yet another edition of this world leading exhibition.



The entire Eurovent family expresses its gratitude to CAR, CRAA, and the CR Expo organisers for the long-lasting cooperation and support. We are confident that our continuous partnership will remain fruitful, leading to further positive outcomes and new initiatives.

In light of current international trade developments, a strong cooperation between China, Europe, and the Middle East is more relevant than ever in ensuring a global level-playing field for the HVACR industry, promoting state-of-the-art technologies, and in removing trade barriers.

Once again, we wish you a highly successful exhibition. We look forward to personally attending it together with many other Eurovent delegates.

Yours sincerely,

Naci Sahin
President, Eurovent

Brian Suggitt
President, Eurovent Middle East

On behalf of the IIAR, it is our pleasure to welcome all the participants to CHINA REFRIGERATION 2019 in Shanghai.



We would also like to offer our sincere congratulations to the CAR (China Association Refrigeration) and organizing committee for hosting us all again this year for their 30th Exhibition. The CHINA REFRIGERATION EXPO over the years had become one of the most important and successful event in the industry, an annual gathering that no one want to miss. IIAR is honoured to be associated with the event and its long standing relationship with the CAR.



IIAR is the world's leading advocate for the safe, reliable and efficient use of Ammonia, CO2 and other natural refrigerants. IIAR members share their collective knowledge and experience to produce consensus documents that address various aspects of the NATURAL refrigeration industry. IIAR has a very broad industry representation, including manufacturers, design engineers, specialized contractors, end users, academics, scientists, trainers and students. IIAR members come from all over the world, more than 50 countries, with our material being available in English , Spanish , and recently in Chinese as well, the CAR assisting us with the translation of the most important standards and training material.

Since 1971 the IIAR sets the standard for providing advocacy, education and the most up-to-date technical information to the NATURAL refrigeration community. We help professionals to develop their skills and further their careers by promoting the common interests of our growing membership.

Our VISION: to be globally recognized as the leading advocate for the SAFE, RELIABLE and EFFICIENT use of Ammonia, CO2 and other Natural Refrigerants.

Our MISSION: the provide ADVOCACY, EDUCATION and STANDARDS for the benefit of the global community in the safe and sustainable design, installation and operation of natural refrigerant systems.

IIAR wish all the participants and visitors of China Refrigeration Expo 2019 a very fructuous conference and exhibition and we are looking forward to the continuous and successful cooperation with CAR and the China refrigeration Industry for the growing development and usage of Natural Refrigerant in China.

With our sincere and warmest regards.

Dave Rule
President of the IIAR

Guy Evon Cloutier
Regional Vice-Chair – China and Asian
International Committee



International Institute of Refrigeration (IIR)

On behalf of the International Institute of Refrigeration (IIR), it is my pleasure to welcome all participants to China Refrigeration 2019. The IIR is proud to be associated with this key event showcasing refrigeration in Asia.



The IIR is an independent intergovernmental science and technology-based organisation that promotes knowledge of refrigeration and its associated technologies that improve quality of life in a cost effective and environmentally sustainable manner, including in:

- Food quality and safety from farm to consumer
- Comfort in homes and commercial buildings
- Health products and services
- Low temperature technology and liquefied gas technology
- Energy efficiency
- Safe usage of non-ozone depleting and low global warming refrigerants.

Ensuring that there is enough food to satisfy the entire planet has been strongly reaffirmed as a global development goal. Moreover, cutting down on post-harvest losses with refrigerated storage and transport is a way of reducing greenhouse gas emissions caused by the significant energy waste of producing food products that will ultimately be lost. This goal is just as important as the environmental actions that we need to implement at the same time: phasing out Hydrochlorofluorocarbons (HCFCs), phasing down Hydrofluorocarbons (HFCs), increasing energy efficiency and using renewable energies.

2019 is the year of the implementation of the Kigali amendment to the Montreal Protocol, which entered into force on January 1, and will oblige companies to adapt their strategies and investments. The China Refrigeration Expo will certainly help identify the right solutions to adopt.

China Refrigeration 2019 will be one of the most important global events in 2019 and we hope that it will be a great success.

Didier Coulomb
Director General of the IIR



On behalf of the 315 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 2019 China Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging, and Storage. The many member companies that will exhibit here is a true testament to the importance of the Chinese market. Another strong indicator of that importance is AHRI's increasing reliance on Chinese laboratories for regional testing of specific equipment types. The ability to test here and sell here makes the Chinese market that much more attractive for many of our members.



We also are pleased and proud to collaborate with the China Association of Refrigeration (CAR) and the China Refrigeration and Air Conditioning Association (CRAA), both of which help AHRI members do business in China, while also greatly contributing to global efforts in standards and certification harmonization. Through personal interactions and through their trade association, AHRI, our member companies based in China collaborate not just on individual business issues, but also on issues of common industry concern, including energy efficiency, refrigerant policy, and environmental stewardship. Some of that collaboration is through international partnerships such as the International Council of Air-Conditioning, Refrigeration, and Heating Manufacturers Associations (ICARHMA), which strengthen our global industry. CRAA is a valued member of ICARHMA, which comprises 11 industry associations from around the world.

AHRI – and I, personally – will once again be pleased to travel to China to participate in the exhibition, and we look forward to seeing old friends and making new acquaintances as we continue our productive relationship. We thank you for your friendship and hospitality and look forward to an excellent show!

Sincerely,

Stephen R. Yurek
President and CEO



Congratulations on China Refrigeration Expo 2019



ASHRAE congratulates the Chinese Association of Refrigeration (CAR) on China Refrigeration Expo 2019. For 30 years, the China Refrigeration Expo has served as a notable platform for showcasing the advancements of HVAC science and technology to improve the quality of life for people around the world.

In 2006, CAR and ASHRAE signed a Memorandum of Understanding that formally established a collaborative effort dedicated to promoting and advancing our shared interests and those of HVAC&R professionals. Both organizations remain loyal to the objectives of that agreement through the support of each organization's research and technical programs.

This year, ASHRAE's Society theme, "Building Our New Energy Future," focuses on our role as a bridge that connects buildings, energy and the environment. The China Refrigeration Expo and our partnership with CAR, reminds us of the importance of bridging relationships to secure a more energy efficient future. Together, we will continue to strengthen our positions as leaders for engagement across many industry sectors here in China and across the globe.

The China Refrigeration Expo is an important venue for meeting industry professionals and discovering new products and services that meet our common goal of improving the performance of buildings. Presentations and demonstrations will provide new insights into the application of existing and innovative technologies to provide comfortable, healthy and safe indoor environments for today and tomorrow. For the latest information about ASHRAE, I invite you to visit Booth W3E47, located in Hall W3.

It truly is an honor to work alongside CAR. Together, we will reach our goal of a sustainable world for all.

Once again, congratulations on the China Refrigeration Expo's 30 year presence in our industry.

Sincerely,

A handwritten signature in black ink that reads "Sheila J. Hayter".

Sheila J. Hayter, P.E., Fellow ASHRAE
2018-2019 ASHRAE President

EIA extends its heartfelt wishes on the occasion of the Chinese New Year and for the coming 2019 China Refrigeration Expo.



As the Kigali Amendment to Montreal Protocol is now entering into force, companies now have a great opportunity to lead the global market transformation, as the transition away from HFC refrigerants is already well underway in China as well as the world. EIA congratulates the entire organizational committee and wishes you the best in showcasing the most energy efficient and climate-friendly technology.



Over almost the last three decades, China Refrigeration Expo has worked with the entire industry to ensure movement towards technology that is better both in terms of performance while minimizing impacts on environment and climate. Given the new information last year about continued use of banned ozone-depleting substance CFC-11 in some sectors and portions of the industry, it is critical that companies in this sector rise to these new challenges, apply the lessons learned from over two decades of great work in going to good technology and not just be vigilant about illegal production, consumption and trade of banned chemicals, but also proactively take actions to discourage them for continued success.

Avipsa Mahapatra
Climate Campaign Lead
Environmental Investigation Agency

One of the most important dates every year is the China Refrigeration Expo!

The world comes together to have a look into the near future of refrigeration, air-conditioning, heating and ventilation, Frozen Food Processing, Packaging and Storage. 31 years of success are taking place in Shanghai and it is my great pleasure to be a part of it, not only to see the newest technology but also to meet friends.



We as VDKF show our acknowledgement to the entire organizing committee, to build up such a high-quality display and exchange platform to respond to a worldwide industry expectation.



My cordial congratulation for the China Refrigeration Expo 2019 – getting younger and more important every year.

Reinhard Jeschkeit
Vice President of VDKF



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 guests and participants of the China Refrigeration Expo 2019!

China Refrigeration Expo 2019 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.

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 2019.

I would like to note well thought-out and accurate work of the organizers of the China Refrigeration Expo 2019. 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.

Co-operative 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 2019 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) in the indoor climate quality and energy saving engineering

IURI TABUNSHCHIKOV
President ABOK (Russian HVAC&R society)

I would like to thank you all for inviting us as the Turkish HVAC-R Association.



Association of Refrigeration. Thanks to these kinds of organizations, we have a better chance at getting to know each other in the HVAC&R sector. In return, we would like to host you at ISK-SODEX Exhibition in Istanbul.

I believe that the China Refrigeration exhibition is very important globally. We, as the Turkish HVAC-R Exporters Association, always encourage our members to participate to the CR exhibition. I wish all participants a successful exhibition.



Best regards

TURKISH HVAC&R EXPORTERS – İSİB
Vice Chairman - ZEKİ POYRAZ

To the kind attention of



China Refrigeration Expo Organizing Committee



ISKİD, Air Conditioning Refrigeration Air Conditioning Manufacturers' Association which represents Turkey's HVAC-R sector extend congratulates CAR and organizers of China Refrigeration Exhibition.

We appreciate for contribution on sector of Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage by reaching all around the world. Today's world, strong relationships between two nations provide us to opportunity that developing sectors. It has been efficient time to build new business cooperation and follow new technologies during China Refrigeration Exhibition 2019.

Thank you for your hospitality and friendship and believe that the good relations between our organizations will continue to improve.

Sincerely,

Ozan Atasoy

İSKİD President

EXPECTATION



Dear organizing team of China Refrigeration 2019,

The China Refrigeration Expo is one of the most important global trade fairs for the heating, ventilation, air conditioning and refrigeration industry worldwide. It is also the indispensable showcase for European companies in the far East. The 31st anniversary of your trade fair confirms the still growing importance of the show for the HVAC& R sector and related products, services and technologies.

During the current decade, trade relations between China and Germany developed significantly, doubling the German exports of HVACR products to China. High-quality German products are very well received on the Chinese market. While imports from China have also tripled to Germany. In summary, the exchange of goods between China and Germany has grown about twice as fast as the total German foreign trade.



The thematic focus "Cooperation and Innovation for Development" perfectly fits with the current challenges of digital transformation, efficiency targets and sustainable solutions.

VDMA, the mechanical engineering industry association, appreciates very much the invitation to China Refrigeration 2019 and we cordially congratulate the Chinese Association of Refrigeration, CAR for the long and excellent tradition of the trade fair and we wish the China Refrigeration Expo 2019 great success.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'T. Schrader', written in a cursive style.

Thomas Schrader
Managing Director Air Handling Technology Association
within VDMA, Germany
Managing Director VDMA Building Technology Services and
BIM-Spokesman of VDMA Forum Building Technologies



ALL INDIA AIR CONDITIONING AND REFRIGERATION ASSOCIATION



CAR is a friend of Aiakra now from last twenty years. Both these associations are leading trade bodies of HVAC&R in their respective countries .Aiakra is taking a Delegation for China Refrigeration show every year since year 2000.From last few years we also get chance to Welcome President and other senior office bearers of CAR during Acrex in India.

After Mr. JinJiawei taking over as President of CAR along with Mr. Wang Congfei as deputy Secretary General, both our associations have come more close to each other.

China is major trade partner of India and members of Aiakra are having great interest to import from China products and components, Tools etc connected with HVAC&R industry. That is one reason why many of our members want to join our delegation to China to cover China Refrigeration Exhibition.

China show is becoming more and more professional with each passing year and offer excellent hospitality and opportunities to the visitors. Our delegates always get VIP status in this exhibition.

We wish a great success for China Refrigeration at Shanghai during April 2019.
With my personal warm regards for the organisers,

Vinod Kumar Rekhi
President,
All India Air Conditioning & Refrigeration Association

Message to CAR from ISHRAE ,



China Refrigeration , the Flagship Event of the HVAC & R Industry in Asia , is keenly awaited each year by Exhibitors and Visitors alike , for its beneficial business and networking opportunities . CR 2019 at Shanghai , will present myriad and unique opportunities to all .

Heating , Ventilating and Air Conditioning raises productivity and provides indoor comfort from the stresses of extreme heat and cold , while Refrigeration preserves nourishment , assures food security and extends healthcare services for Humanity , thus enhancing the lives of millions .

CR 2019 provides a Platform to demonstrate the best innovations in products and services of this life enhancing Industry, to the World.

ISHRAE , Indian Society of Heating , Refrigerating and Air Conditioning Engineers has a long and cherished relationship with CAR , the Chinese Association of Refrigeration . ISHRAE will be present with many Members and manufacturers from India to interact and participate at key events at CR 2019 to strengthen our interaction .

ISHRAE sends its best wishes to CR 2019 for its grand success .

Vikram Murthy
National President , ISHRAE



JARN 雜誌

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



First published in February 1969, JARN (Japan Air Conditioning, Heating & Refrigeration News, Ltd.) is the only English-language magazine published in Japan that covers the latest news from around the world on the HVAC&R industry, markets, products, new technology, major trade shows, and various promotional activities conducted by global industry leaders.

With its continuously expanding worldwide circulation and long-standing information network, JARN has proven to be an invaluable source of information for decision-makers from all sectors of the air conditioning, heating, and refrigeration industry. JARN is constantly evolving in order to respond to readers' expectations, and 18 issues of JARN magazine are published each year now, with 12 regular issues and six special issues covering cutting-edge themes. eJARN.com keeps users abreast with JARN's breaking news and most popular articles, and the extensive archives can be viewed. eJARN's features include markets, corporate news and product-specific sections.

On behalf of all JARN colleagues, 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 2018. 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 refrigeration and air conditioning industry and China Refrigeration Expo.

I would like to seize this opportunity to wish the 30th China Refrigeration Expo every success!

JARN is happy to join hands with industry colleagues to grow and achieve even greater success!

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

Keisho Ka
President
JARN

JRAIA

The Japan Refrigeration and Air Conditioning Industry Association

CHINA REFRIGERATION 2019

February 2019

On behalf of the JRAIA member companies, I would like to express my sincere congratulations on the CHINA REFRIGERATION EXPO 2019 in Shanghai that brings together manufacturers, industry experts, and visitors from over the world.



JRAIA, the Japan Refrigeration and Air Conditioning Industry Association, has 70 years' history since established in 1949, and we will celebrate 70th anniversary with current 167 member companies in June. I believe that JRAIA has been contributing to the industry as a leading association and expanding the area of activities.

Japan's market trend in 2018 was consistent, and most sectors in HVAC industry of Japan remained stable. On the other hand, phase-down of hydrofluorocarbons (HFCs) has been continuously discussed, and JRAIA has actively engaged in development of the standards and guidelines for safe use of alternative refrigerants as well as promotion of energy saving products.

Reduction plan of HFCs in the Kigali Amendment to the Montreal Protocol has started since January 2019. Japanese government ratified the Kigali Amendment in December 2018, but we are still investigating how to take proper action on the refrigerant management and meet the future target for the reduction schedule of the Kigali Amendment.

Refrigerants management and energy efficiency are becoming more important for HVAC industry. We would like to further contribute to the industry development in cooperation with industry associations including CRAA.

I believe that this exhibition 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,

Toshiyuki Takagi
Chairman of the board,
The Japan Refrigeration and Air Conditioning Industry Association (JRAIA), Japan



Congratulation Message to China Refrigeration Expo 2019

JSRAE members all send our best wishes to China Refrigeration Expo 2019, one of the world's greatest events. In the modern society, refrigeration and air-conditioning are essential items, and in Asia, many emerging technologies and tons of new products are developed and spread the world. During China Refrigeration Expo 2019, environmental and energy issues, including refrigerant issues, are expected to be discussed between the national and international attendees and exhibitors, and the results will contribute to humanity's greatest challenges. I wish the success of China Refrigeration Expo 2019 and the attendees and exhibitors. And also hope for the continued development of CAR, JSRAE, and other related societies, keeping friends with.

Noboru Kagawa
JSRAE President

Congratulatory Remarks from the Delegate of Korea to International Institute of Refrigeration (IIR)

It is my great pleasure to join the 30th China Refrigeration Expo in Shanghai. I am very thankful for the cordial invitation from the Chinese Association of Refrigeration. This exhibition must be a great chance to meet many people from all over the world, and to share valuable information with them. Nobody can deny that many diverse new products with creative ideas fill the huge space for the exhibition. For the last almost 10 years, I have participated in the China Refrigeration Expo, and I was really surprised every time by its development in the most surprising manner regarding its size and quality of the exhibition. I am sure this Expo must be a fruitful and profitable exhibition in our refrigeration and air-conditioning society.



It is said that this exhibition has lasted for 30 years, and we should accept that this Expo contributes to our refrigeration and air-conditioning industry not only in China, but also in many other countries including Korea. The importance of refrigeration and air-conditioning can never be overemphasized because these can provide comfort living and working environment together with efficient industrial manufacturing conditions. In this sense, China Refrigeration Expo certainly offers lots of valuable information to the businessman, researchers, and policy makers with the latest products, ideas and designs, which will definitely show future directions of our industry.

Without invaluable efforts of the organizing committee members of the Chinese Association of Refrigeration in addition to several participating companies in diverse fields, this Expo can never be a top class event. I would like to express my great thanks to the related members for their dedication and sacrifice. I hope the Chinese Association of Refrigeration will keep a close and friendly relation with the academia and industry. Finally, I hope to convey my sincere congratulation on this well-established China Refrigeration Expo.

Min Soo KIM, President
Korean National Committee of International Institute of Refrigeration (IIR)



Congratulation message for CR EXPO 2019



On behalf of KRAAC (Korea Refrigeration and Air-conditioning Assessment Center), I would like to congratulate this “China Refrigeration EXPO 2019” with all my heart.

I believe that CR EXPO will be more and more prosperous exhibition in the future as the largest HVACR exhibition in the world. With the advent of the fourth Industrial revolution era, the convergence of various new technologies such as IoT (Internet of things), big data and others is important. I hope CR EXPO will provide harmonious opportunities to see the innovation and expansion of technology in the refrigeration and air-conditioning sector as well. Furthermore,

I think it will be helpful for both of China and Korea, with the cooperation of each other in the new technology and information of HVACR field.

KRAAC has been established in 2006 as non-profitable organization for assisting Korean HVAC companies to get overseas certifications. KRAAC is working on testing, assessment, technology development and energy policy in HVACR field in Korea. In addition, KRAAC is the representative testing laboratory accredited by KOLAS, which is focused in the efficiency and verification tests related to MEPS of the Korean government.

Finally, I would like to congratulate deeply again and express my sincere appreciation to the members of the China Association of Refrigeration (CAR) and China Refrigeration and Air-conditioning Industry Association (CRAA) for their efforts to hold this exhibition “China Refrigeration EXPO 2019”

Jungtae Woo, President
Korea Refrigeration and Air-conditioning Assessment Center (KRAAC)



Congratulatory message for the China Refrigeration 2019

I would like to extend my sincere congratulations on the opening of the 30th China Refrigeration 2019 on behalf of KRAIA.



CRH, one of the greatest air-conditioning and refrigeration exhibitions in the world, has shown remarkable growth with the refrigeration and air-conditioning industry of China. Beyond China and Asia, CRH now became the leading exhibition on displaying the global trend of air-conditioning and refrigeration industry. CRH 2019 will be an extraordinary one as we will have an opportunity to trace the 30 years of footsteps of Chinese air-conditioning and refrigeration industry which developed rapidly by the open-door policy and innovative activities by the international exchange.

The global refrigeration and air-conditioning industry are still in steady growth thanks to not only the major developed countries, but also the steady demand from the developing countries as well. Now the size of this market has expanded up to 200 billion dollars. Moreover, the convergence of the technology from the 4th industrial revolution, such as AI and ICT technology in this industry enables significant reduction in energy consumption. To prevent the global warming issue, various kind of Low-GWP refrigerant and the application are shown up, and due to the fine dust problem, IAQ solutions would be the main topic on this industry as well. I am looking forward CRH 2019 to be a place where the professionals of our industry from all around the world find a valuable opportunity to gain reciprocal outcome through active exchange and cooperation. Furthermore, I expect additional events such as seminars and conferences will also open another door to the opportunity of exchanging the new industrial technologies, products, and environmental-friendly technologies. I promise KRAIA will also actively be a part of it.

Lastly, I wish all the best for the success of CRH 2019, which would be the greatest festival of refrigeration and air conditioning professionals all around the world. KRAIA will continue close cooperation with CRAA, and wish to maintain such an extraordinary relationship in the future.

Thank you.

Hwanyong Nho
Chairman of KRAIA

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SAREK

SAREK Presidential Messages to China Refrigeration Expo 2019

On behalf of my entire organization SAREK, we extend our heartiest congratulations to CAR (Chinese Association of Refrigeration) for hosting the 30th China Refrigeration Expo which is to be held in Shanghai on April 9-11 2019.



As we know well CAR Expo has been successfully held for past 30 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 30 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 30 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

Yongchan KIM, Ph.D.
President
SAREK, Republic of KOREA

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台灣區冷凍空調工程工業同業公會
理事長 朱賜祥 敬賀

Congratulatory Message for the Opening of China Refrigeration Expo 2019



香港空調及冷凍商會有限公司

On behalf of the Hong Kong Air Conditioning and Refrigeration Association (ACRA), it is my pleasure to extend my most sincere congratulations on the grand opening of the 29th China Refrigeration Expo.

Over the years, the China Refrigeration Expo brings the entire HVAC&R industry together under one roof to learn about the latest technologies and products that are shaping the market trends, the Expo is also considered as a dialogue platform for sharing innovation, promoting progress and fostering cooperation among the industry insiders.

I wish the China Refrigeration Expo a great success and we look forward to working closely with Chinese Association of Refrigeration in the future.

Yours sincerely,

WU Chi Fai
President
The Hong Kong Air Conditioning and Refrigeration Association





Congratulatory Message from ASHRAE Hong Kong Chapter



On behalf of ASHRAE Hong Kong Chapter, I would like to congratulate the success of CR Expo 2019.

For the past years, the CR Expo has made a valuable platform for the manufacturers, buyers, engineering professionals and related specialists to show the latest technology and product. The CR Expo is one of the largest exhibitions in the world, thousands of exhibitors get together to introduce their new

products to the visitors. It is also an excellent opportunity to exchange news and ideas in the Expo.

The exhibition range covers from refrigeration, heating, ventilating, air conditioning to frozen food technology. All these products not only closely relate to our daily life but also improve our quality of living. The contribution of this exhibition is obvious.

With the strong leadership, CR Expo will achieve new heights in the years to come.

WONG Shu Hung
President (2018-19)
ASHRAE Hong Kong Chapter

Congratulatory Message for CR EXPO 2019

On behalf of the Chartered Institution of Building Services Engineers, Hong Kong Branch, I would like to extend my warmest congratulation on the Grand Opening of the 30th China Refrigeration Expo which will be held at Shanghai New International Expo Centre, China on April 9-11, 2019.

Over the past 30 years, the CR Expo has been successfully held and reputed as one of the most important exhibitions in HVAC&R industry and has been recognized as a unique and essential professional exhibition. It always brings and draws the attention of academic and industrial professionals together to push forward industry innovation, enhance sustainability and promote technology exchange & cooperation.

The diversified exhibitors and technical seminars always attract numerous trade visitors and professionals from around the world to the show.

I have no doubt that the upcoming CR Expo 2019 will be another successful and fruitful event and I look forward to enhance our working relationship with the Chinese Association of Refrigeration for the betterment and the benefit of the HVAC&R industry.



Ir Dr. Raymond K.L. Chan
Chairman (2019–2020)

The Chartered Institution of Building Services Engineers, Hong Kong Branch



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China Refrigeration Expo 2019 Theme Forum

Time	Venue	Topic
April 9 09:00-12:00	Grand Ballroom, 3rd Floor, Jumeirah Himalayas Hotel	<p>1. Analysis of China's Economic Development Situation ——Professor Liu Naiquan, Leader of Regional Economy, School of Urban and Regional Science, Shanghai University of Finance and Economics</p> <p>2. DC Buildings and Distributed Energy Storage – An Important Way for Low Carbon Energy ——Professor Jiang Yi, Academician of Chinese Academy of Engineering, Tsinghua University</p> <p>3. Advance Craftmanship of Great Powers ——Wu Desheng, Professorate Senior Engineer, Consultant Chief Engineer, Beijing Institute of Architectural Design Co., Ltd., Director of Expert Committee of China Refrigeration Expo</p> <p>4. Connectivity, Digitisation and Industry 4.0 ——Dr. Thomas Schröder, VDMA Germany, Member of Eurovent</p>

CRH 2019 Symposiums Schedule

No.	Symposium	Date/Time	Venue
1	Sino-Danish Ammonia Refrigeration Safety International Forum	9:45—11:45 Apr. 9, 2019	Conference Room E2-M19, SNIEC
2	New standards for refrigeration and air conditioning equipment	14:00—16:30 Apr. 9, 2019	Conference Room E1-M15, SNIEC
3	Sustainable heating solutions: Swedish & Sino experiences	14:00—16:30 Apr. 9, 2019	Conference Room E1-M16, SNIEC
4	Green supply chain of HVAC equipment for Real estate	14:00—16:30 Apr. 9, 2019	Conference Room E2-M17, SNIEC
5	Innovation Products Forum 2019	14:00—16:30, Apr. 9, 2019	Conference Room E2-M18, SNIEC
6	Senior Engineer Forum	14:00—16:30, Apr. 9, 2019	Conference Room E2-M19, SNIEC

No.	Symposium	Date/Time	Venue
7	International Cold Chain Technical Forum	14:00—16:30, Apr. 9, 2019	Conference Room E3-M23, SNIEC
8	Symposium on Heat Pump Technology and Application (I)	14:00—16:30, Apr. 9, 2019	Conference Room E4F09, SNIEC
9	Technology and Application of Air Source Heat Pump Heating in Hot- summer and Cold-winter Area	9:30—12:00, Apr.10, 2019	Conference Room E1-M13, SNIEC
10	Low GWP Refrigerant Compressor Technology and Application	09:30—12:00, Apr.10,2019	Conference Room E1-M15, SNIEC
11	Technology Forum of Clean Heating in North China	09:30—12:00, Apr.10,2019	Conference Room E1-M16, SNIEC
12	Refrigeration and Air Conditioning Young Designers Summit Forum	09:30—12:00, Apr. 10,2019	Conference Room E2-M17, SNIEC
13	Thermal Management of New Energy Vehicles	09:30—12:00, Apr. 10,2019	Conference Room E2-M18, SNIEC
14	2019 Ozone2Climate Industry Roundtable	9:00—12:00; 13:30—16:30, Apr. 10, 2019	Conference Room E2-M19, SNIEC
15	New Refrigeration Technology and Product	9:30—12:00, Apr. 10, 2019	Conference Room E3-M23, SNIEC
16	Construction, Operation, Maintenance and Management of Refrigeration and Air Conditioning System	9:30—12:30, Apr. 10, 2019	Conference Room E3-M24, SNIEC
17	Heat Pump and Air-Coditioning——Low GWP and Energy Efficiency Promotion	09:30—12:00, Apr. 10,2019	Conference Room E4F09, SNIEC
18	Evaporation Cooling Air Conditioning Technology	09:30—12:00, Apr.10,2019	Conference Room W2-M9, SNIEC
19	Seminar on Refrigeration Equipment and Storage-Transportation Technology	09:30—12:00, Apr.10,2019	Conference Room W3-M10, SNIEC
20	Development of Heat Exchangers	14:00—16:30, Apr. 10,2019	Conference Room E1-M15, SNIEC
21	Forum on Innovation and Development of Light Commercial Refrigeration	14:00—16:30, Apr. 10,2019	Conference Room E1-M16, SNIEC
22	European Legislation and Its Impact on Manufacturers in China	12:30—13:30, Apr. 10,2019	Conference Room E2-M17, SNIEC
23	Development of Refrigerator Truck Technology	14:00—16:30, Apr. 10,2019	Conference Room E2-M18, SNIEC
24	Sino-Indian Cold Chain Forum——Business Opportunities in India	14:00—16:30, Apr.10,2019	Conference Room E1-M15, SNIEC
25	Symposium on Heat Pump Technology and Application (II)	14:00—16:30, Apr. 10,2019	Conference Room E4F09, SNIEC
26	The 2nd Indoor Air Purification and Fresh Air Technology Symposium	13:30—16:30, Apr.10, 2019	Conference Room W3-M10, SNIEC

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Timetable for Technical Seminars

No.	Date/Time	Company	Topic	Venue
1	April-9 09:30-12:00	The Organizing Committee of China Refrigeration Expo Journal of HV&AC	Salon of Environmental Control Technology for Underground Railway	Conference Room 6, 1st Floor, Conference Center, Holiday Inn
2	April-9 11:00-12:00	MAYEKAWA China Industries Co., Ltd.	Mayekawa's CO ₂ Technology and New Refrigeration Unit 『South Polar』	E4-M25
3	April-9 11:00-12:00	China Refrigeration and Air-Conditioning Industry Association (CRAA)	Press Conference of the 13 th Science and Technology Contests for College Students of China R&AC Industry	E2-M20
4	April-9 13:00-14:00	Parker Hannifin Motion & Control (Shanghai) Co., Ltd.	CO ₂ Refrigeration & Heatpump Flow Control Solution	W5-M8
5	April-9 14:00-15:00	Parker Hannifin Motion & Control (Shanghai) Co., Ltd.	NH ₃ /CO ₂ Product Application in Industrial Refrigeration Market	W5-M8
6	April-9 13:00-13:30	Danfoss (Shanghai) Automatic Controls Co., Ltd.	NovoCon- New Generation Digital Actuator Enabling Smart HVAC	E3-M22
7	April-9 13:40-14:10	Danfoss (Shanghai) Automatic Controls Co., Ltd.	Danfoss Case Study-US Steel Tower	E3-M22
8	April-9 15:00-15:30	Danfoss (Shanghai) Automatic Controls Co., Ltd.	Danfoss Refrigeration Solutions in IT Cooling Application	E3-M22
9	April-9 15:40-16:10	Danfoss (Shanghai) Automatic Controls Co., Ltd.	Introduction of Danfoss Industrial Refrigeration New Products	E3-M22
10	April-9 13:30-16:00	LG	LG HVAC Solution	W2-M3
11	April-9 13:30-17:00	LG	LG HVAC Solution	W4-M6
12	April-9 13:30-16:30	Beijer Ref (Wuxi) Co. Ltd	Trans critical Carbon CO ₂ System	E4-M26
13	April-9 13:30-16:30	Fujian Snowman Co.,Ltd.	CO ₂ Refrigeration Products & Cloud Monitoring Technology Design and Industry Application	E4-M25
14	April-9 14:00-15:00	Panasonic Appliances Air-Conditioning and Refrigeration (Dalian) Co., Ltd.	Industry Energy Comprehensive Utilization of Cold and Hot Solution	E1-M11
15	April-9 14:00-16:00	China Refrigeration and Air-conditioning Industry Association (CRAA) Beijing Zhixindao Sci-Tech Corp.,Ltd. (ChinalOL)	Launch of the White Paper on China Refrigeration and Air-Conditioning Industry Development in 2018	W3-M10

No.	Date/Time	Company	Topic	Venue
16	April—9 14:00—16:00	Royal Service Air-conditioning (Guangdong) Corporation	Royal Service Smart Variable Air Diffuser Products & System Design Application	W4-M7
17	April—9 14:00—16:00	Johnson Controls-Hitachi Wanbao Compressor (Guangzhou) Co., Ltd.	Development and Application of Hitachi DC Inverter Scroll Compressor	E4-M27
18	April—9 14:00—16:30	Chinese Association of Refrigeration	«The fifth anniversary of 2018 China Refrigeration Market Development Report with special edition» launch event	E3-M24
19	April—9 14:00—16:30	Reflex (Shanghai) Heating & Energy Equipment Co., Ltd.	Reflex HVAC Products Briefing All Series of Conferences —— Create a New Realm of Intelligent and Comfortable Home	W1-M1
20	April—9 14:00—15:30	GREE Electric Appliances Inc. of Zhuhai Co., Ltd	Application and Research of Permanent Magnetic Synchronous Inverter Energy-saving Technology in Railway Transportation Field	W2-M9
21	April—10 08:30—12:00	The Organizing Committee of China Refrigeration Expo Building Environment and Energy Utilization Branch of China Engineering & Consulting Association	Technical Seminar of National Chief Engineer Delegation	Jinxiu Hall A, 2nd Floor, Holiday Inn Shanghai Jinxiu
22	April—10 09:00—10:00	Emerson Climate Technologies (Suzhou) Co., Ltd	Emerson Integrated Solutions for Air-conditioning and Heat Pumps	E2-M14
23	April—10 10:00—12:00	Emerson Climate Technologies (Suzhou) Co., Ltd	Emerson Cold Chain Solutions	E2-M14
24	April—10 09:30—12:00	Chinese Association of Refrigeration	Work Conference on Charrette of the CAR Light Commercial Refrigeration Joint Research Center	W3-M4
25	April—10 09:30—11:30	BSRIA Business Consulting (Beijing) Co.,Ltd.	2018 Global HVAC Industry Market Trend and Data Analyse Seminar (Chinese)	E4-M27
26	April—10 09:30—11:30	MayAir (Technology) China Co., Ltd.	Keep Calm and Breathe Deep- D-Breath	W5-M8
27	April—10 09:30—10:00	CAREL Electronic (Suzhou) Co., Ltd	Museum Humidification Solution	W2-M2
28	April—10 10:15—11:00	CAREL Electronic (Suzhou) Co., Ltd	CAREL Residential Solution	W2-M2
29	April—10 11:15—12:15	CAREL Electronic (Suzhou) Co., Ltd	High Efficiency Control Solutions for Commercial Refrigeration (Refrigeration & Retail)	W2-M2
30	April—10 10:00—10:30	Danfoss (Shanghai) Automatic Controls Co., Ltd.	Danfoss Airconditioning & Heat Pump Scroll Product Introduction	E3-M22
31	April—10 10:40—11:10	Danfoss (Shanghai) Automatic Controls Co., Ltd.	Danfoss New Heat Exchanges Technical Sharing	E3-M22

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No.	Date/Time	Company	Topic	Venue
32	April—10 11:20—11:50	Danfoss (Shanghai) Automatic Controls Co., Ltd.	Danfoss Inverter Scroll Compressor for Medium Temp. Refrigeration	E3-M22
33	April—10 10:00—10:20	Dalian Refrigeration Co., Ltd.	Liquefaction of Wellhead Natural Gas and Utilization of LNG Cold Energy	E1-M11
34	April—10 10:30—10:50	Wuhan New World Refrigeration Industrial Co., Ltd.	Comprehensive Utilization of Residual Heat and Pressure of Steam	E1-M11
35	April—10 11:00—11:40	Dalian Fuji Bingshan Control Systems Co., Ltd.	Technology and Product Introduction - Energy and Logistic Management System	E1-M11
36	April—10 10:00—12:00	FuSheng Industrial (Shanghai) Co., Ltd.	The Application and Introduction of Fusheng Centrifugal Compressor with Magnetic Levitation and New Launched Two-stage of Screw and Scroll Assembly Refrigeration Compressor	W4-M6
37	April—10 10:00—12:00	Hollingsworth & Vose (Suzhou) Co., Ltd.	A Novel Total Solution for Superior Indoor Air Quality—— AHU Filtration ISO16890 & FCU Solution	W4-M7
38	April—10 10:30—11:30	BAC China	BAC Solutions in HVAC Industry	W2-M3
39	April—10 10:30—17:00	BITZER Refrigeration Technology (China) Co., Ltd	BITZER “YOUR GREEN WORLD” CO2 SEMINAR	E2-M20
40	April—10 09:30—11:30	Officine Mario Dorin S.p.A	DORIN CO2 Compressors and Technology for Refrigeration and Heat Pump Application	E4-M25
41	April—10 10:00—12:00	Shanghai Panfluor Chemical Tech Co., Ltd.	Shanghai HIGHLY Freezing and Refrigeration Inverter Compressor Technology	W1-M1
42	April—10 13:30—15:30	BSRIA Business Consulting (Beijing) Co.,Ltd.	2018 Global HVAC Industry Market Trend and Data Analyse Seminar (English)	E4-M27
43	April—10 14:00—15:00	BAC China	BAC Solutions in Industrial and Refrigeration Industries	W2-M3
44	April—10 14:00—16:00	Vector Controls Ltd.	Smart and Simple — An Introduction to Vector’s X2 System	W5-M8
45	April—10 14:00—16:30	Chinese Association of Refrigeration	The Press Conference of Chilling Prospects: Providing Sustainable Cooling for All	E1-M13
46	April—10 14:00—16:30	Chinese Association of Refrigeration	Data Center Cooling Forum	E3-M24
47	April—10 14:00—17:00	aquatherm Pipe System (Shanghai) Co., Ltd.	BIM, Realize the Architectural Beauty	E3-M21
48	April—10 14:00—15:30	The Chemours Chemical (Shanghai) Co., Ltd.	Applications and Development of Low GWP HFO-based Refrigerants in Air Conditioning, Industrial and Commercial Refrigeration	E4-M25
49	April—10 14:00—15:00	Zhejiang Dentwiton Heat Pump Co., Ltd	“Waternion 3G” Product Promotion Seminar from Dentwiton——The Real Three Constant System	W1-M1

2019 Heat Pump Pavilion Events

Organizers:

UN Environment UNDP

IECO CRAA

Meeting Time: April-10 9:30–16:30

Meeting Place: Shanghai New International Expo Center E2-M18, SNIEC

Lectures:

1. Progress and Policies in China for adoption of alternative refrigerant technologies
Jin Zhao, Project Officer, International Environmental Cooperation Center, Ministry of Ecology and Environment of China (IECO)
2. Policy Trends for Ozone & Climate Friendly Technologies
Alvin Jose, NU Environment OzonAction
3. India Cooling Action Plan – A umbrella policy framework to address cooling sector
Vikram Murthy, Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)
4. Global Refrigerant Technology Transition: Progress and Issues
Anderson Alves, Technical Specialist, United Nations Development Programme (UNDP)
5. An Industry Perspective on the HFC Phase Down: Where We Go From Here
Stephen Yurek, President and CEO, Air-conditioning, Heating, and Refrigeration Institute (AHRI)
6. The F-Gas Regulation in Europe: 7 Lessons Learned
Andrea Voigt, Director General, European Partnership for Energy and the Environment (EPEE)
7. Research on small ammonia charge of the cold storage industry
Jiang Shaoming, Deputy chief engineer, Moon Environment Technology co., Ltd.
8. Carbon dioxide in refrigeration and heating applications in China
Alex Han Xingwang, Chairman, Heilongjiang ARCO Technology Ltd
9. Application of R32 Technologies: Latest Development and Issues
Wang Xianlin, Vice Director, Gree Electric Appliances, Inc. of Zhuhai
10. R290 Technology & Application Research & Development
Guo Weihua, Director, Emerson Climate Technologies(Suzhou)Co., Ltd.
11. Industry Trends in China: Effort and Challenges
Zhang Zhaohui, Vice Chairman & Secretary General, China Refrigeration and Air-Conditioning Industry Association (CRAA)
12. Ozone and Climate Friendly Technology Transition: Progress and Expectation of R&AC Industry
Tetsuji Okada, President, Japan Refrigeration and Air Conditioning Industry Association (JRAIA)

2019 Ozone2Climate Technology Roadshow & Industry Roundtable Events

Topic	Date/Time	Venue
Ozone2Climate Technology Roadshow	April 9–11 9:00–17:00	Roadshow Booth E3-G31
General Session	April 10 9:30–16:30	Conference Room E2-M19
Cold Chain	April 9 10:00–12:30	Roadshow Booth E3-G31
Good Practice in Servicing Sector	April 9 13:30–16:30	Roadshow Booth E3-G31
Air-conditioning and Heat Pump	April 10 9:30–12:00	Roadshow Booth E3-G31
Refrigerant & Recovery, Reclaim and Recycle of refrigerant	April 10 13:00–16:30	Roadshow Booth E3-G31

Introduction on Heat Pump Pavilion of China Refrigeration Expo 2019

I.I.Heat Pump Pavilion

April 9–11, 2019

Booth E4F09 in Hall E4

Managed by Heat Pump Committee of China Refrigeration and Air- Conditioning Industry Association

II.Contents of Heat Pump Pavilion

The Heat Pump Pavilion has three parts: Leading Technology Display Area, Demonstration Cases Display Area and Seminar Area.

1.Leadng Technology Display Area: Over ten companies will showcase industry-leading heat pump technology through their products

2.Demonstration Cases Display Area: These demonstrative cases illustrate in detail the actual effect of the products during the application process

3.Seminar Area: Two Symposiums on Heat Pump Technology and Application and one seminar on “Low GWP and Energy Efficiency Promotion of Heat Pump Products” will be organized. Industry experts and scholars as well as outstanding corporate representatives will be invited to deliver their opinions and share their experiences.

The seminars will be broadcast live, and be synchronously released to the public.

III. Agenda of seminars

1. Symposium on Heat Pump Technology and Application(I)

Time: 14:00–16:30, April 9, 2019 (hosted by Secretary General Wu Min)

Time	Topic	Speakers
14: 00–14: 30	Welcome speech	Organizers of CRH2019
14: 30–15: 00	Topic to be decided	Academician Jiang Yi, Tsinghua University
15: 00–15: 30	Application of Multi-energy Complementary Heat Pump Composite System in a Three Star Green Building Case	Li Xiangdong, Chief Engineer, Shandong Provincial Architectural Design and Research Institute
15: 30–16: 00	Application of CO2 Air Source Heat Pump in Cold (Freezing) areas	Heilongjiang ARCO Technology Co., Ltd
16: 00–16: 30	Sharing of Heat Pump Dehumidification Technology for Wood Drying Research and Application Effect	Tongfang Artificial Environment Co., Ltd
16: 30–17: 00	Central Air Conditioning Market Research Report 2018	I MEDIA

2. Heat Pump and Air Conditioning - Low GWP and Energy Efficiency Improvement

Time: 9:30–12:30, April 10, 2019 (hosted by Han Wei and Chen Jingliang)

Time	Topic	Speakers
09: 30–10: 00	Keynote speech	He Ping, Project Director, Energy Foundation Beijing Representative Office
10: 00–10: 20	Progress of China's Refrigeration Energy Efficiency Project	Han Wei, Project Supervisor, Energy Foundation Beijing Representative Office
10: 20–10: 50	Progress in the Revision of Energy Efficiency Standards for Heat Pumps and Air-conditioners	Cheng Jianhong, Researcher, China National Institute of Standardization
10: 50–11: 20	Comparison of Energy Efficiency of Global Household Air Conditioning and Heat Pump	Wang Yue, Director of Home Air Conditioning Standardization, Gree Electric Appliances Inc. of Zhuhai
11: 20–11: 40	Design and Progress of the Research Project of Refrigerating Energy Efficiency Improvement Roadmap of Ningbo City	Jin Keyi, Assistant Dean, Investment and Development Institute, Ningbo International Investment Consulting Co., Ltd.
11: 40–12: 10	HFCs Alternative Emission Reduction Environmental Benefits and Challenges	Professor Hu Jianxin, Peking University
12: 10–12: 30	Selection of Heat Pump and Air Conditioner Alternative Refrigerant	Professor Shi Lin, Tsinghua University

ORGANIZATION

3. Symposium on Heat Pump Technology and Application(II)

Time: 14:00—16:30, April 10, 2019 (hosted by Professor Li Xianting)

Time	Topic	Speakers
14:00—14:30	Hybrid Heat Pump Features and Applicability	Professor Li Xianting, Tsinghua University
14:30—15:00	Analysis on Energy Consumption Features of Intermittent Operation of Air Source Heat Pump in Residential Buildings	Professor Zhang Xu, Tongji University
15:00—15:30	Regional Heating Clean Energy Solutions	Qingdao Haier Air- Conditioning Electronics Co., Ltd.
15:30—16:00	Heat Pump System Adaptability and Performance Improvement Approaches	Professor Zhang Xiaosong, Southeast University
16:00—16:30	Analysis on Single Stage Screw Compressor in Low-temperature Air Source Heat Pump Application	Shanghai Hanbell Precise Machinery Co., Ltd

Sino-Danish Ammonia Refrigeration Safety International Forum

Opening Speech

CN VIP from Ministry of Emergency Management

Ms. Annelise Fenger, Deputy Director General, Danish Ministry of Environment and Food, Danish Veterinary and Food Administration

Chinese Association of Refrigeration

Key-note speech

1.Chinese government management works sharing for Ammonia refrigeration safety by Ministry of Emergency Management

2.Presentation of refrigeration in food sector and introduction of Danish government policies within ammonia refrigeration safety

3.Industry background and current situation by Chinese Association of Refrigeration

4.Brief introduction of the China Ammonia Refrigeration industry related standards & regulations by domestic design institute

5.Case/Real Project Knowledge Sharing

Danfoss – solution sharing

Moon Group – solution sharing

6.End User Sharing related the 1st community standards by CAR

China Refrigeration Expo Innovation Products 2019

HVAC&R Components

No.	Enterprise	Product	Booth Number
1	SHANGHAI HIGHLY ELECTRECAL APPLIANCES CO., LTD.	BLACK MAX	W3D09
2	Johnson Controls-Hitachi Wanbao Compressor(Guangzhou) Co., Ltd.	DD98PHDG Large Capacity DC INV Scroll Compressor	E1C55
3	Zhejiang Sanhua Intelligent Controls Co., Ltd.	FMF series Fan coil electric valve for water	E2D41
4	Zhejiang Sanhua Intelligent Controls Co., Ltd.	LPF series low inner leakage electronic expansion valve	E2D41
5	Nidec Compressors(Tianjin) Co., Ltd.	NLU8.8DN-R290 Reciprocating Compressor for Heat Pumps	E2B09
6	SHANGHAI HANBELL PRECISE MACHINERY CO., LTD.	RC2-T High-temperature heat pump compressor	E2F15
7	FUJIAN SNOWMAN CO., LTD.	SRC-S-353 Propane Compressor	E1F15
8	Fusheng Industrial (Shanghai) Co., Ltd.	SST 2-stage compression refrigerant compressor	W2E55
9	Zhuzhou National Engineering Research Center of Converters Co., Ltd.	tPower-IC converter of central air-conditioning	W3F41
10	Emerson Climate Technologies (Suzhou) Co., Ltd.	Emerson R32 Variable Speed Compressor(80CC)	E2D09
11	BITZER Refrigeration Technology(China) Co.,Ltd.	HS95103	E2F01
12	Danfoss Automatic Controls Management (Shanghai) Co., Ltd.	Danfoss 50TR fix speed scroll compressor	E2D01
13	Danfoss Automatic Controls Management (Shanghai) Co., Ltd.	Danfoss CO2 Adaptive Liquid Management (CALM)	E2D01
14	Danfoss Automatic Controls Management (Shanghai) Co., Ltd.	Danfoss new high-efficiency fish scale micro plate heat exchanger (MPHE) with bi-metal connections C12	E2D01
15	ZHEJIANG DUNAN ARTIFICIAL ENVIRONMENT CO.,LTD.	VRV Super-silent High Durability Electronic Expansion Valve	W3F31
16	ebm-papst Ventilation (Shanghai) Co., Ltd.	EMC improved condenser fan and evaporator blower for electric buses' cooling system	W1D09
17	Emerson Climate Technologies (Suzhou) Co., Ltd.	Copeland Scroll™ZB Large Commercial Refrigeration Compressor	E2D09
18	Panasonic Appliances Compressor(Dalian) Co., Ltd.	CO2 Twin Rotary Compressors for Refrigeration and Heat Pump Application	E1D01
19	Hangzhou Sanhua Home Appliance Thermal Management System Co., Ltd.	Brazed plate heat exchanger	E2D41
20	GMCC&Welling	Heat Pump Water Heater Compressor RDSM89V1TDZ	W2F41
21	GEA Refrigeration Technologies(Suzhou) Co., Ltd.	a New Industrial Screw Compressor M	E2F31
22	GMCC&Welling	BRUSHLESS DC MOTOR	W2F41

ORGANIZATION

General Air Conditioning and Heat Pump Equipment

No.	Enterprise	Product	Booth Number
1	QINGDAO HAIER A/C ELEC CORP., LTD.	Haier E+ IoT MRV	W3D41
2	Moon Environment Technology Co., Ltd.	GMCU-NH3 Micro-filling Ice-water Unit	E1F01
3	NATHER VENTILATION SYSTEM CO., LTD.	Wall-mounted new heat exchange fan FA150-W	W4F15
4	GD Midea AIR-Conditioning Equipment Co., Ltd.	Midea Hot Flame Series Full DC Inverter Low Temperature ATW HPWH	W3F25
5	Moon Environment Technology Co., Ltd.	Dynamic Ice Slurry Unit	E1F01
6	Panasonic Appliances Air-Conditioning and Refrigeration (Dalian) Co., Ltd.	Gas-fired water-fluorine composite air-conditioning heat pump system	E1D01
7	GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI	Magnetic Suspension Direct Refrigerating AC	W2D25

General Refrigeration Equipment

No.	Enterprise	Product	Booth Number
1	Danfoss Automatic Controls Management (Shanghai) Co., Ltd.	Semi-Welded Plate Heat Exchanger and corresponding sub system solutions (PHE & Solution)	E2D01
2	CAREL Electronic(Suzhou) Co., Ltd.	HECU CO2	W2D01

Air Conditioning Heat Pump and Refrigeration Equipment for Special Purposes

No.	Enterprise	Product	Booth Number
1	Moon Environment Technology Co., Ltd.	GWHS-HFO High Temperature Water-Vapor Integrated Unit	E1F01
2	QING DAO HAIER SPECIAL FREEZER CO., LTD.	Cryogenic and Refrigeration Convertible Chest Freezer	W3D41
3	Jinan Dasen Refrigeration Equipment Technology Co., Ltd.	Total Heat Recovery Steam Generator Unit	E1E31
4	WUHAN-NEW WORLD REFRIGERATION INDUSTRIAL CO., LTD.	Steam screw expander	E1D01

One Hundred Chief Engineers of National Design Institutes Will Debut at CR Expo 2019

Entrusted by the organizing committee of China Refrigeration, sponsored by China Refrigeration and Air Conditioning Industry Association and Building Environment and Energy Utilization Branch of China Engineering and Consulting Association, and organized by Beijing CRAA Certification Center, the 10th National Design Institutes Chief Engineers Observation Group will be unveiled at China Refrigeration 2019.

The scale of National Design Institutes Chief Engineers Observation Group of China Refrigeration has increased year by year. It is estimated that the number of experts this year will be about 100, making it a 100-people group for the first time. The event will have a series of in-depth exchange activities during and after China Refrigeration to build a face-to-face communication platform for HVAC companies and experts from design institutes to explore the ways to upgrade HVAC products technology, predict the technical roadmap for future products, and help enterprises establish development strategies to avoid development risks.

I. National Design Institutes Chief Engineers Observation Group Activity during China Refrigeration

1. Themed with “Credibility and Integrity, Innovation and Development”, the activity of National Design Institutes Chief Engineers Observation Group during China Refrigeration 2019 will invite chief (deputy) engineers from national design institutes.
2. Experts from Chief Engineers Observation Group will attend the opening ceremony and theme forum of the 30th China Refrigeration Expo, and listen to the theme reports of the Expo from 9:00 to 12:00 on 9th April.
3. Chief Engineers Observation Group will be separated into teams to visit exhibition hall from 14:00 to 17:00 on 9th April. They will conduct in-depth exchanges on new technologies, new products, and new functions with exhibitors to jointly explore the development trend of the HVAC industry.

4. A technical exchange meeting will be held in the conference room of Holiday Inn Shanghai Jinxiu from 9:00 to 12:30 on 10th April. The exchange meeting sets up a speech session for chief engineers, a speech session for enterprises and an interaction session. The session of chief engineers' speech will be delivered by the relevant chief engineers focusing on the factory intelligent manufacturing, rail transit demand, southern heating. In the enterprises speech session, the co-organizer will introduce new products and new technologies to chief engineers of observation group. During the interaction session, the leaders of co-organizer will face-to-face exchange and interact with the chief engineer of Observation Group to discuss hot issues of the industry.

II. Activities of National Design Institutes Chief Engineers Observation Group after the Expo

In 2017, the Designers Entering Enterprises event invited the chief engineers from design institutes to visit Haier and Phnix for face-to-face communication, and effectively solved the technical development and strategic decision-making problems such as technology roadmap selection and market expansion. We will continue with this activity in 2019 to enable chief engineers enter more enterprises and promote better development of the enterprises.

In order to jointly promote the healthy development of the HVAC industry, Beijing CRAA Certification Center invites industry enterprises, experts and scholars to participate in the National Design Institutes Chief Engineers Observation Group in 2020. If necessary, please visit exhibition booth of Beijing CRAA Certification Center (Booth No.: E4E01) for on-site consultation.

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The Global Industry Brand “China Refrigeration” will Debut in Wuhan and Chongqing

Sponsored by the China Council for the Promotion of International Trade Beijing Sub-council, Chinese Association of Refrigeration, and China Refrigeration and Air-Conditioning Industry Association, and organized by Beijing International Exhibition Center, the International Exhibition for Refrigeration, Air Conditioning, Heating and Ventilation and Frozen Food Processing (China Refrigeration) is created in Beijing in 1987. The event has been successfully held for 30 editions in Beijing, Shanghai and Guangzhou thanks to the support, participation and promotion of relevant government departments, industry organizations, R&D institutions, production and operation businesses, professional and mass media at home and abroad. In 2012, China Refrigeration became one of the three major professional HVAC & R exhibitions in the world.

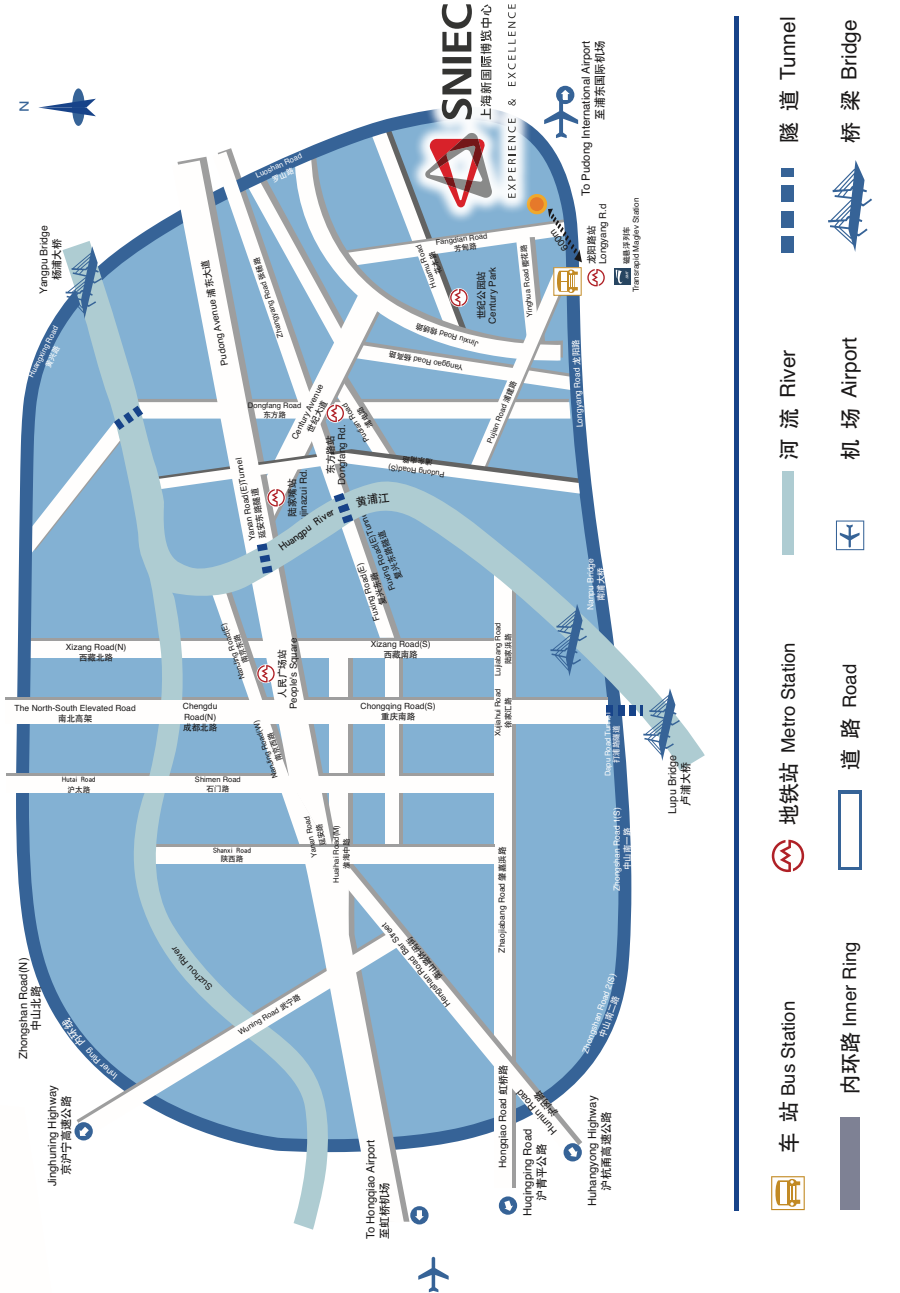
According to analysis and judgment of the economic situation and industry development at home and abroad in recent years, in order to help expand market room for businesses, amplify exhibitors and spectators participation experience, and boost development of HVAC & R industry, the Organizing Committee of China Refrigeration has repeatedly sent out joint working groups to a number of central cities and industrial clusters across the country from November 2016 to investigate on the spot cities and venues that can undertake super-large international professional exhibitions, navigating new development space for China Refrigeration.

Through two years investigation, the Organizing Committee of China Refrigeration conducted a holistic, in-depth and multidimensional assessment and examination on the central cities' policies, industrial distribution, scientific research level, business environment, exhibition halls, traffic conditions and supporting facilities coupled with corporate visits, questionnaires and online interactions, and widely listened to the will of exhibitors and audience. The final decision was that the 31st China Refrigeration will be held in Wuhan International Expo Center in 2020 with an exhibition area of 120,000 square meters, and the 33rd will be held in Chongqing International Expo Center in 2022 with an exhibition area of 135,000 square meters. The two editions in odd years will still be held in the Shanghai New International Expo Centre.

The new era poses China Refrigeration a heavy task, but we shall "stay true to our mission and keep moving forward". Our industry advantage, rich experience in exhibition, constantly enhanced platform building effort and improved service levels will help endorse our aspiration to create more business opportunities for large, medium and small-sized enterprises at home and abroad, injecting new vitality to healthy and sustainable development of China HVAC & R industry.

上海新国际博览中心位置图

地理位置 GEOGRAPHIC LOCATION



格力中央空调 全面实现永磁同步变频化

格力中央空调始终坚持节能创新，不断实现技术突破，将大功率永磁同步变频技术应用于离心式冷水机组，攻破技术壁垒，实现磁悬浮变频技术国产化，全面实现从多联式风冷冷（热）水机组、模块式风冷冷（热）水机组到风冷螺杆机组、水冷螺杆机组、离心式冷水机组的永磁同步变频化。

全系列搭载永磁同步电机



高效
行业原创大功率高速永磁同步电机，最高效率达97.5%



低损
永磁体转子，无励磁系统损失，发热量小，电机损耗小



可靠
H级电机，绝缘等级高，可靠性强

全直流变频户式风冷冷(热)水机组(分体式)

GMV6人工智能多联机

永磁同步变频风冷螺杆机组

永磁同步变频离心机

永磁同步变频水冷螺杆机组

全直流变频模块式风冷冷(热)水机组

全直流变频户式风冷冷(热)水机组(整体式)



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第三十一届国际制冷、空调、供暖、通风及食品冷冻加工展览会

THE 31ST INTERNATIONAL EXHIBITION FOR REFRIGERATION, AIR-CONDITIONING, HEATING AND VENTILATION, FROZEN FOOD PROCESSING, PACKAGING AND STORAGE



武汉国际博览中心
WUHAN INTERNATIONAL EXPO CENTER



2020年4月8-10日
APR 8-10, 2020

主办单位



承办单位



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第三十届国际制冷、空调、供暖、通风及 食品冷冻加工展览会

THE 30TH INTERNATIONAL EXHIBITION FOR REFRIGERATION,
AIR-CONDITIONING, HEATING AND VENTILATION, FROZEN
FOOD PROCESSING, PACKAGING AND STORAGE

合作创新
共谋发展

2019年4月9-11日
中国·上海新国际博览中心

April 9-11, 2019
Shanghai New International
Expo Centre, China

主办单位



承办单位



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