



# ACRA NEWSLETTER

## Summer 2025



### CONTENTS

**Message from the President** 3-4

**Feature Article** 6-7  
Overhauling Payment Security in Hong Kong's Construction Sector  
Navigating the New Landscape of Payment Security in Hong Kong's Construction Industry

**People Interview** 10-11  
Ar Prof Ada FUNG, BBS

**Industrial News** 14-15, 18-19  
Compliance and Transition  
Preparing for the Ozone Layer Protection (Amendment) Ordinance 2024  
2025 China Refrigeration Expo

**Technology Update** 20-21  
Electricity-free Cooling Coating: The Future Path Beyond Traditional Cooling Methods

**Project Highlight** 25-28  
Kai Tak Sports Park

**ACRA Activities** 30-32

**Youth Committee** 34-36, 38  
Experience Sharing Interview with The HKIE Mechanical Discipline Advisory Panel Equip Ourselves for Geared-Up Future Challenges Ahead  
YMC Activities

**Membership List** 40-43

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# Message from the President



**Ir Dr. Pachu LEUNG**  
President

2025 has presented significant challenges for the construction industry, following subdued land acquisition activity by developers in 2024 and ongoing uncertainties in the global economic landscape. Despite these obstacles, ACRA remains steadfast in its commitment to advancing industry development. Throughout this period, our council members have actively engaged with government departments in regular discussions, advocating for industry interests. Meanwhile, our committees and the Youth Committee have diligently organized various initiatives, including specialized exchanges with mainland professionals and six technical visits to the Greater Bay Area, fostering knowledge-sharing and collaboration among members.

## Annual Membership Growth and Industry Contributions

We are pleased to announce our membership growth (with 225 nos of company members) and industry contributions over the past year, reflecting the trust and value our association delivers. This achievement underscores the collective efforts of our members and the impactful initiatives we have undertaken to advance the industry.

## Government Liaison and Industry Collaboration

Throughout the year, we have actively engaged with key government departments and liaison groups, including ASD, EMSD, FSD, HKGBC, and OSHC. Our participation in high-level meetings, policy discussions, and advisory forums has enabled us to provide expert recommendations on regulatory updates, sustainability initiatives, and workforce development. These engagements reinforce our role as a trusted industry voice and our commitment to shaping a progressive regulatory landscape.

## Event Organization and Member Engagement

We successfully organized a diverse range of events, including:

- Technical workshops on emerging industry standards
- Networking forums to foster collaboration
- Training sessions to enhance professional skills

These events attracted strong participation, facilitating knowledge exchange, strengthening professional relationships, and keeping members informed of the latest industry trends

## Technical Advisory and Legislative Developments - EMSD - Refrigerant Technical Advisory Committee (RTAC)

In 2023, we proactively supported our members in joining the Voluntary Registration Scheme for Technicians Handling Mildly Flammable Refrigerant for Household Air-Conditioners, initiated by the EMSD. As of May 16, 2025, we have conducted the 28th Class of Practical Training for household air-conditioners using mildly flammable refrigerant, successfully training 560 practitioners over two years.

Following the establishment of the RTAC in 2024, we eagerly anticipate the legislative process for mandatory technician registration, which will formally recognize skilled workers for their safety awareness and professional expertise. Our participation in the inaugural RTAC meeting on September 26, 2024, underscored our commitment to close collaboration with the EMSD on this initiative. Notably, ACRA is an approved official training provider, offering the required Theory and Practical courses for technicians seeking registration.

## Regulatory Updates and Implementation

ASD disseminated its Amendment Specification on Galvanized Zinc Coating in August 2024. In support of this, we organized the online seminar on quality control and acceptance procedures for strengthened air duct zinc coating (有關最新加強風喉鋅鍍層質量控制及驗收程序-網上簡介會), facilitating a smooth implementation of the new testing requirements. This initiative aims to enhance industry assurance and promote collaborative dialogue.

Additionally, in response to ArchSD's request for assistance, ACRA is currently gathering corresponding GB (Guobiao) standards (國家標準) related to products and equipment listed in the General Specifications.

## Sustainability and Green Initiatives, HKGBC - Best Practice Scheme and Green Product Certification

HKGBC introduced the Best Practice Scheme Label for Buildings, aimed at developers and facilities management companies to promote energy efficiency in electrical and mechanical (E&M) services.

In July 2024, ACRA participated in the Focus Group Discussion on Reviewing and Enhancing the CIC Green Product Certification Scheme, providing expert insights into sustainable air-conditioning solutions for Hong Kong's E&M sector. Furthermore, on May 26, 2025, ACRA was honored to represent the air-conditioning industry at the launch ceremony of GPC Scheme 2.0, marking a significant milestone in sustainable construction practices.

## Safety and Workforce Development - Construction Industry Safety Initiatives

ACRA strongly emphasizes site safety awareness. To enhance industry safety standards, the Construction Industry Council (CIC) introduced the Frontline Personnel Safety Performance Recording Scheme, a standardized system for monitoring safety compliance. We have actively promoted this initiative among our members.

Jointly organized by EMF and HKFEMC, the E&M Safety Walk remains a flagship event aimed at instilling a strong safety culture across multiple trades, including Electrical, HVAC, Fire Services, Plumbing & Drainage, and Lift Installation. ACRA proudly participated in its 22nd edition, reaffirming our dedication to safety excellence.

## Training and Professional Development - Skills Training and Industry Support

The 47th WorldSkills Competition took place in Lyon, France in September 2024. It is a biennial event organized since 1996 to provide a platform for young people aged 21 or below to challenge themselves against professional standards and skills. IPP Ir MT Law & I attended this meaningful occasion and witnessed participants obtained 1 gold, 1 silver, 2 bronzes and 11 excellences, the best results recorded.

The WorldSkills Competition Hong Kong (WSCHK) in the Refrigeration and Air Conditioning category will be held from June 26 to 27, 2025, under the organization of VTC. ACRA is honoured to have five council and committee members participate as assessors, contributing their expertise to evaluating participants' skills and knowledge.

## Corporate Social Responsibility

ACRA is dedicated to fulfilling its corporate social responsibility and making meaningful contributions to the Hong Kong community. In collaboration with HKFEMC and Open-Door Ministries, we successfully distributed "Happy Bags" to 200 households of senior citizens in need at Lam Tin on September 14, 2024, and January 11, 2025.

I extend my heartfelt gratitude to each of you, including council members, youth committee members, valued members, for your commitment and dedication. Together, we will continue to build on this momentum and drive further progress in the coming year.

## Technical Visits

ACRA's dedication to fostering industry exchange has facilitated several international technical visits. From October 9 to 14, 2024, ACRA organized a technical visit to Osaka, where participants engaged with leading manufacturers and professionals—including Hisaka, Daikin, Panasonic, and Shinryo District Cooling installation. The visit provided an opportunity to exchange insights on new production technologies and discuss future development plans.

Additionally, from April 26–29, 2025, ACRA coordinated a joint visit to the 36th CR Expo in Shanghai, offering firsthand exposure to industrial applications and technology integration at top manufacturers such as ebm-papst, BELIMO, Trox Asia Pacific, and Grundfos Pumps. These initiatives underscore ACRA's role in promoting cross-border knowledge sharing and industry collaboration.

Additionally, ACRA organized several technical visits to the Greater Bay Area, offering members valuable exposure to cutting-edge technologies and industrial innovations at leading facilities, including:

- Dongguan Mesan Cooling Tower Factory (June 22, 2024)
- Shenzhen Qianhai District Cooling Plant (November 9, 2024)
- Zhongshan Saiver Welaire Air-Conditioning Equipment Co., Ltd. (November 9, 2024)
- Zhongshan MECmi Tech MiMEP/DfMA Manufacturer (November 9, 2024)
- Hong Kong Kai Tak Sports Park (November 16, 2024)
- Shunde & Foshan Midea Smart Factory & Smart Hospital Solutions (December 13–14, 2024)

## ACRA Upcoming Technical Visit & Website Revamp

ACRA is preparing for its upcoming technical visit to Midea's Chiller Production Facilities and District Cooling Plant in Chongqing, scheduled for June 19–22, 2025. This visit will further expand knowledge-sharing opportunities and strengthen industry collaboration.

In line with our modernization efforts, ACRA is currently revamping its official website ([www.acra.org.hk](http://www.acra.org.hk)), with the new version set to launch by the end of 2025. The upgraded platform will feature:

- Enhanced functionality for a smoother user experience,
- Expanded promotional opportunities for members,
- Tailored advertising packages (details to be announced upon launch).

As we move forward, ACRA remains committed to:

- Fostering industry excellence,
- Championing sustainability,
- Supporting the professional growth of our members.

We sincerely appreciate the trust and dedication of our stakeholders, whose contributions continue to drive the air conditioning and refrigeration sector toward innovation and success.



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A JOINT VENTURE



## Feature Article

# Overhauling Payment Security in Hong Kong's Construction Sector Navigating the New Landscape of Payment Security in Hong Kong's Construction Industry

## Introduction

Gazetted on 27 December 2024, the Construction Industry Security of Payment Ordinance (CISPO) to take effect on 28 August 2025, marks a momentous era in Hong Kong's construction domain. This legislation is poised to reform payment dispute resolution mechanisms, ensuring heightened security and obligation for all stakeholders engaged in construction projects. Understanding CISPO's implications is paramount for industry players to prepare adequately for the impending changes.

For a long time, the construction sector in Hong Kong has been plagued by payment irregularities, resulting in financial uncertainty and conflicts. CISPO aims to alleviate these issues by refining payment terms in contracts and implementing a quick, interim-binding adjudication process for determining payment disputes by an independent and impartial party. Developed through studies and consultations with stakeholders and construction industry over 20 years, this legislation is inspired by similar frameworks in Australia, Malaysia, Singapore and the United Kingdom, adapted specifically for the needs of Hong Kong.

## Scope and Coverage

Key points regarding covered contracts and claims under CISOP :

Type of Contract	Value Threshold	Covered Aspects
Construction Work	Main contract exceeding HKD 5 Million	New build and work on existing buildings or facilities and defined non-residential repair and alternation works requiring BA's approval
Related Goods and Services	Exceeding HKD 500,000	<ul style="list-style-type: none"><li>- Materials incorporated into construction work</li><li>- Equipment used</li><li>- Transportation</li><li>- Feasibility studies</li><li>- Consultancy services</li><li>- Materials testing</li></ul>
Subcontracts	All subcontracts if the main contract is covered; value thresholds do not apply separately	

## Covered Claims

- CISPO applies to payment claims and related payment disputes for progress payments in construction contracts.
- Progress payments include interim and final payments, additional payments (including time-related claims).
- Not covered: Claims by the paying party (except for set-off if a payment response is served) or claims for breach of contract.

## Exclusions

- Work carried out outside Hong Kong.
- Contracts related to existing residential buildings (e.g., interior renovation, building maintenance).
- Relatively minor works on existing non-residential buildings not requiring Building Authority approval (e.g., maintenance and repair of building services installation, shop renovation).

## Contractual Restrictions

- Parties cannot opt-out of CISPO.
- Any contractual provision inconsistent with, excluding, modifying, or restricting CISPO's operation is void.

## Key Provisions

CISPO introduces pivotal provisions to fortify payment security and streamline dispute resolution:

Prohibited Provisions	Conditional payment terms like "pay when paid" are forbidden, ensuring payment cannot be withheld based on funds from higher-tier contracts.
Mandatory Provisions	Irrespective of contract terms, these include a 60-day maximum window between a claim and payment deadline, granting claimants the right to adjudicate disputed or unpaid sums.
Default Provisions	Unless specified otherwise, these cover payment claim submission dates and progress payment calculations.
Optional Provisions	Contracts can integrate additional clauses tailoring CISPO implementation, such as specific procedures for supplemental payments.

Feature Article

Overhauling Payment Security in Hong Kong's Construction Sector  
Navigating the New Landscape of Payment Security in Hong Kong's Construction Industry



## Adjudication Process

A pivotal aspect of CISPO is the introduction adjudication system designed for swift and intended cost-effective payment dispute resolution:

Claim and Response	Responding within 30 days, the paying party must settle dues within 60 days after the date on which payment claim for progress payment is served
Adjudication Initiation	Within 28 days of a dispute, the claimant can initiate adjudication by serving notice on the respondent and Adjudicator Nominating Body (ANB).
Adjudicator Appointment	ANB appoints an independent adjudicator within seven working days.
Submissions and Procedures	Parties exchange submissions, with the adjudicator adhering to CISPO and ANB rules while establishing requisite procedures.
Decision	The adjudicator must decide within 55 working days, with the determination being interim and enforceable through courts.
Enforcement	Failing compliance, the aggrieved party can seek enforcement through courts within 14 days.

## Suspension and Delay

CISPO empowers claimants to pause work if payment is not forthcoming, with a 5 working day notice period. Upon payment, work must resume within 5 days, entitling the claimant to time extensions and compensation for losses.

## Reflections and Important Takeaways

The Ordinance signifies a crucial development for the construction industry, embodying collaborative efforts towards industry enhancement. Unprecedented delays in paying workers and subcontractors have significantly impacted project finance. Through the enforcement of mandatory payment security, the Ordinance is expected to streamline payment processes and potentially lead to cost efficiency, healthy cash flow, more collaboration and less disputes in construction projects.

As the government initiates preparatory work for the Ordinance by registering Authorized Nominated Bodies (ANBs), revising standard contract and subcontract templates, and actively promoting its adoption, anticipation builds for its full implementation later this year. The impending enforcement holds the promise of revolutionizing the construction industry, fostering transparency, efficiency, and equitable payment practices. Stakeholders eagerly await the transformative effects that the Ordinance will bring, reshaping industry standards and practice and promoting a more sustainable and prosperous construction sector.

## Impact Analysis of CISPO

Aspect	Current Scenario	Under CISPO
Payment Claims	Diverse timelines	Standardized, 60-day payment period
Conditional Clauses	Widespread usage	Prohibited, ensuring prompt payment
Adjudication	Lengthy and complex	Streamlined, interim-binding (max 62 working days)
Suspension Rights	Limited application	Clear right to suspend work after 5-day notice
Enforcement	Litigation often needed	Interim enforcement of a determination made in adjudication through courts within 14 days

*Only a recent report released by the Hong Kong Construction Industry Employees General Union has highlighted a HK\$300 million backlog in delayed payments and project fees suffered by the construction workforce, there are even more substantial amounts of delays and outstandings in payment settlement at contractor and subcontractor levels. This envisages and emphasizes the urgency for immediate reform.*

### Feature Article

#### Overhauling Payment Security in Hong Kong's Construction Sector

#### Navigating the New Landscape of Payment Security in Hong Kong's Construction Industry



Kai Tak Sports Park

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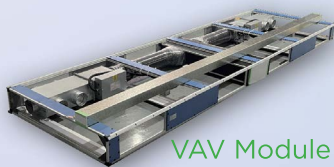
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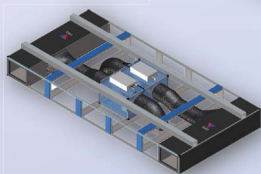
VAV Module



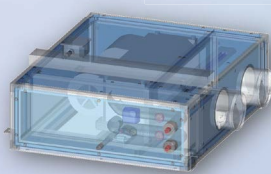
Plenum Module



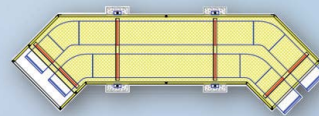
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在建築工程界這個充滿挑戰和機會的領域，“馮宜萱Ada”這名字應該無人不曉。從求學到入行，從參與工程項目建設到推動產業創新，Ada以她深厚的專業素養、豐富的實踐經驗以及對建築工程的無限熱愛，寫著屬於自己的獨有篇章。冷凍商會有幸邀請到Ada接受專訪，分享她的人生智慧，相信讀者定能從中獲益良多。

## 興趣啟航，築夢建築

Ada從小便對繪畫、積木和各類建構玩具情有獨鍾，這份對建構的熱愛，為她日後選擇建築專業埋下了種子。在大學階段，她義無反顧地以建築作為第一志願，踏上專業學習之路。她在香港大學的學習生活中，不僅掌握了紮實的理論知識，還透過速繪、砌磚、紮鐵等實踐課程，深刻體會到了建築的細節與精妙。在她眼中，建築並非冷冰冰的鋼筋水泥，而是蘊含無限創意與人性溫度的藝術品。



## 精研細築，突破挑戰

### 與時並進，創新研發

Ada堅信「與時並進」是產業發展的關鍵，她認為遇到困難是創新研發的絕佳時機。在建築領域，資源的稀缺、環境的限制等難題，往往是促使產業進步的催化劑。

### 活到老，學到老

Ada始終秉持終身學習的理念，她深知建築業的複雜性和多變性，因此不斷學習新知識、掌握新技能，以適應行業的發展需求。她不僅在專業領域不斷深造，也積極關注產業動態和尖端技術，將所學應用於實務中。

### 開則炒樓，智慧應對

在談到「開則炒樓」時，Ada解釋建築師的「炒樓」是“Plot Ratio”的意思，即在建築設計中要充分利用有限的土地資源，合理規劃建築佈局。她強調，合理規劃建築密度與土地開發比例，是實現永續發展的關鍵。她認為，透過巧妙的設計和規劃，可以在有限的土地上創造更多價值。



## 以民為本，打造舒適家園

Ada在房屋署的工作時期，實踐「以民為本」理念。她深知公共房屋不僅關乎居民的居住空間，也影響他們的生活品質。在設計過程中，始終將居民的需求放在第一位，力求為他們打造舒適、宜居的家園。

在深水埗榮昌邨和九龍城景泰苑計畫中，團隊研發了減音露台和減音窗技術。這類創新設計的靈感來自對居民生活痛點的深刻洞察。她回憶道：「當時我們發現，許多居民都受到噪音的困擾，尤其是靠近馬路的房屋，交通噪音讓他們的生活不得安寧。」為了解決這個問題，她和團隊在減音窗的研發過程中，進行了大量的實地考察和實驗。不僅在實驗室中模擬各種噪音環境，還多次到現場進行測試和調整。最終，他們成功開發出一種既能保證室內通風效果，又能有效降低噪音干擾的減音露台和減音窗。這些嶄新的設計在榮昌邨和景泰苑的應用，顯著改善了居民的居住環境，讓他們享受了前所未有的安靜與舒適。



Ada並未止步於減音窗的創新，在柴灣華廈邨改建項目中，大膽地提出了減音露台加減音窗的第二代設計方案。這項設計不僅為居民提供了更多的戶外活動空間，也進一步降低了噪音對居民生活的影響。為了實現這一目標，她和團隊在設計過程中充分考慮了各種因素，從建築結構的合理性到居民使用的便利性，每一個細節都經過了精心打磨。

在房屋署時期的設計理念，也體現在她對自然通風和採光的重視。她堅信，良好的通風和採光條件是提升居民生活品質的重要因素。因此，在每個項目中都加入氣候及噪音研究，透過科學的數據分析和模擬實驗，為建築設計提供有力支持。她強調：“設計公共房屋時，必須要有對流，確保自然通風和充分採光。這不僅關乎居民的舒適度，更關乎他們的健康和幸福。”

## 推動BIM，賦能產業發展

Ada在推動建築信息模擬(BIM)技術方面，展現了她作為產業先鋒的遠見。她深刻地意識到 BIM 技術在提升建築業效率和品質方面的巨大潛力，因此不遺餘力地推動其應用和發展。房屋署成為第一個應用 BIM 技術的公營機構，認為可以善用BIM技術，因它不僅能夠提高設計效率，還能減少施工錯誤，優化資源分配。透過BIM技術和地理信息系統(GIS)，我們可以在規劃及建築設計階段就進行全方位的模擬和分析，提前發現潛在問題並加以解決，創造最佳的小區布局和樓宇設計。

Ada也積極倡議openBIM多源應用技術，她意識到，不同軟體之間的數據共享和協同工作是提升產業整體效率的關鍵。一個多元化資訊互通的平台，可以整合不同來源的數據，打破軟體之間的壁壘，讓各個環節無縫對接。這樣，我們就能為專案提供更全面、更精準的解決方案。為了推廣openBIM技術，她透過不同組織，成就了多次培訓和研討會，與業界同仁分享經驗，共同探索BIM技術的無限可能。



## 落地為官，親近民生

Ada以「貼地、走前線的落地官員」著稱。始終堅守在工作的前線，堅信只有深入基層，才能真正了解居民的所需所求，設計出符合他們生活的建築作品。

在項目的各個階段都會參與，從設計到施工，再到後期的運維管理，全程跟踪，確保每個環節都達到最高標準。她的這種親力親為的工作態度，為她贏得了廣泛的讚譽和尊重。

## 職場性別平等，共築未來

在談到職場中的性別競爭時，Ada堅定地表示：「男女競爭從來不是問題。」她認為，在建築業，能力和專業素養才是衡量一個人價值的關鍵，而非性別。她指出在工作中，從未因性別而受到限制或歧視，反而覺得女性的細膩與堅韌能夠為行業帶來獨特的視角。

同時也強調，隨著科技的進步和機械化的普及，建築工程業對體力的要求逐漸降低，為女性從業人員提供了更多的機會。鼓勵年輕的女性建築工程人員勇敢追求自己的夢想，充分發揮自身的潛力，為產業發展貢獻獨特的力量。



## 訪問後感

Ada以她對建築工程事業的執著追求和不懈努力，在建築工程業中樹立了卓越的典範。用智慧和汗水，為香港這座城市打造了一座又一座充滿人文關懷與創新精神的居所。她對綠建築的探索、對產業發展的深刻洞察以及對年輕一代的悉心指導，都為建築業的未來指明了方向。

在未來的日子裡，Ada將繼續以敏銳的行業嗅覺、紮實的專業知識和豐富的實踐經驗，引領建築業邁向更輝煌的明天。我們期待她在建築工程領域創造更多的奇蹟，為人們的生活帶來更多美好的改變。



聯和承造

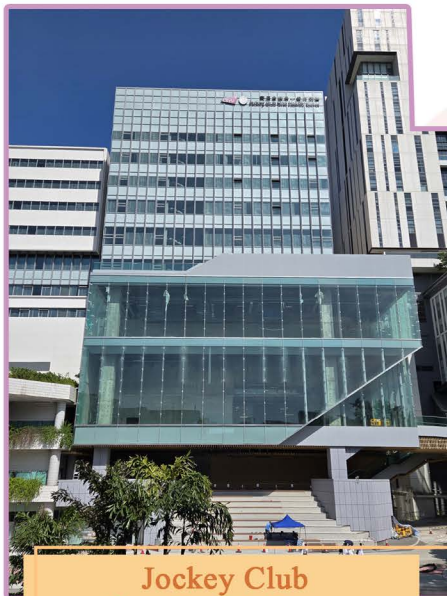
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TRANE  
TECHNOLOGIES

# Compliance and Transition Preparing for the Ozone Layer Protection (Amendment) Ordinance 2024

The HVAC industry is facing significant changes with the passage of the Ozone Layer Protection (Amendment) Ordinance 2024 (Amendment Bill), which was enacted on 2 April 2025. This new legislation aims to implement the Kigali Amendment to the Montreal Protocol, control high global warming potential (GWP) hydrofluorocarbons (HFCs), and ensure the safe handling of hazardous refrigerants. The ordinance will come into operation on 1 December 2025. Here's a comprehensive guide on how the HVAC industry can prepare for these changes.

## 1. Understanding the New Requirements

The Amendment Bill introduces several key changes that directly impact the HVAC industry:

- **Control of High GWP HFCs:** The use of refrigerants with high global warming potential, such as R134a, R407C, and R410A, will be restricted. New refrigerants with lower GWP, like R513A, are recommended.
- **Registration Requirements:** Companies and technicians handling refrigerants must register with the Environmental Protection Department (EPD) or the Electrical and Mechanical Services Department (EMSD).
- **Training and Certification:** Technicians must complete approved training courses to handle specific refrigerants, especially those classified as hazardous.

## 2. Registering with the EPD or EMSD

To comply with the new regulations, HVAC companies and technicians must register with the appropriate authorities before 1 December 2025:

- **EPD Registration:** For handling general refrigerants, companies must register with the EPD. This process involves submitting details about the company, the types of refrigerants used, and the training qualifications of the technicians.
- **EMSD Registration:** For handling hazardous refrigerants or specialized equipment, registration with the EMS is required. This includes providing information on safety protocols and emergency response plans.

## 3. Completing Approved Training Courses

Technicians must complete approved training courses to handle specific refrigerants. These courses cover:

- **Safety Protocols:** Training on the safe handling, storage, and disposal of refrigerants.
- **Technical Skills:** Understanding the properties of new refrigerants like R404A, R410A and R134A and how to work with them.
- **Environmental Impact:** Education on the environmental impact of refrigerants and the importance of reducing GWP.

Several organizations offer these courses, including EMSD, VTC and our Association (ACRA). Companies should ensure that their technicians are enrolled in these courses and obtain the necessary certifications before 1 December 2025.





## 4. Updating Equipment and Practices

HVAC companies should update their equipment and practices to comply with the new regulations:

- **Refrigerant Handling Equipment:** Ensure that all equipment used for refrigerant handling meets the latest safety standards.
- **Record Keeping:** Maintain detailed records of refrigerant usage, storage, and disposal. This includes logs of training completed by technicians and certification details.
- **Emergency Response Plans:** Develop and update emergency response plans for handling refrigerant leaks or other incidents.

## 5. Transitioning to Low GWP Refrigerants

The new ordinance encourages the use of low GWP refrigerants like R513A. HVAC companies should:

- **Evaluate Current Systems:** Assess existing HVAC systems to determine if they can be retrofitted to use low GWP refrigerants.
- **Consult Manufacturers:** Work with equipment manufacturers to understand the compatibility of new refrigerants with existing systems.
- **Plan for Retrofitting:** Develop a plan for retrofitting older systems to use low GWP refrigerants, ensuring minimal disruption to operations by 1 December 2025.

## 6. Staying Informed and Compliant

The HVAC industry must stay informed about ongoing changes and updates to the regulations:

- **Regular Updates:** Keep track of announcements from the EPD and EMSD regarding new guidelines or changes to existing regulations.
- **Participate in Industry Forums:** Engage with industry associations and forums to share best practices and stay updated on compliance requirements.
- **Audit and Review:** Regularly audit company practices to ensure ongoing compliance with the Amendment Bill, especially as it comes into operation on 1 December 2025.

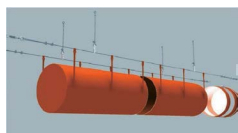
## Conclusion

The passage of the Amendment Bill marks a significant step towards environmental protection and sustainable practices in the HVAC industry. By understanding the new requirements, registering with the appropriate authorities, completing approved training courses, updating equipment and practices, transitioning to low GWP refrigerants, and staying informed, HVAC companies can ensure smooth compliance and contribute to a greener future. With the ordinance set to come into operation on 1 December 2025, it is crucial for the industry to act now to meet these new standards.

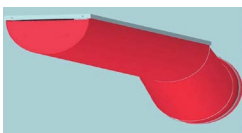
## 布丁織物散風器 Buding Fabric Diffuser

布丁織物散風器 (Buding Fabric Diffuser)  
布丁散風器是用於空氣分佈的柔性管道系統。系統使用特殊布料製成，比傳統的金屬風管輕便且易於安裝。其優點包括降低噪音、更均勻的氣流分佈和減少冷凝。  
布丁散風器廣泛應用於護理安老院、辦公室、餐廳、酒樓、廚房工場和大型體育館等場所，提供高效的空氣分佈解決方案，確保室內環境的舒適性和節能效果。

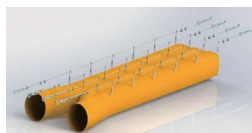
### 風管外型



圓形



半圓形



矩形



重量輕90%



施工期短80%



材料成本低80%



耗電量低20%



無風感覺



無倒汗水



安全環保



外觀多樣化



優越送風



低噪音



易於清潔安裝



殺菌、防塵、防靜電

符合 BS476 Part 6, Part 7 標準

## 風管補漏-90%

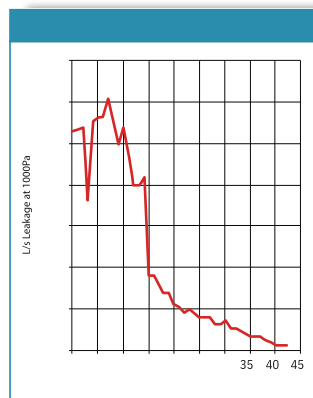


49%建築物的能源消耗  
來自HVAC



35%建築物存在風管洩漏問題，  
導致大量能源被浪費

符合中電  
「綠適樓宇基金」  
申請資格



風管修補前洩漏

**1056.2 L/s**

修補後

**16.2 L/s**

減少漏風率達

**98%**

- 減低能源消耗及成本
- 符合行業規格及要求
- 改善室內空氣質數 (IAQ)
- 改善通風系統
- 減低維修成本
- 密封膠用料安全 符合香港消防局要求  
BS476 Part 6 & 7

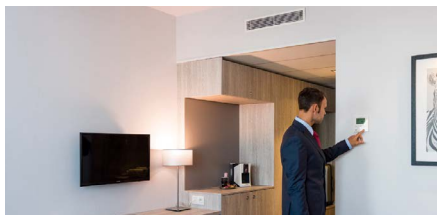
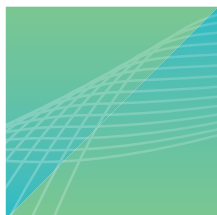




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It has always been San Yik's mission to make the air we breathe and live in the best possible kind of air. We relentlessly strive for excellence in providing products and solutions to deliver comfortable and healthy living spaces across the globe. Throughout our 30+ years history, we have applied our expertise in air conditioning solutions to develop innovative cooling, ventilation, air purification and control systems for residential, commercial and industrial markets.



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## A journey we take together





# 2025中國製冷展

第三十六屆國際製冷、空調、供暖、通風及食品冷凍加工展覽會（簡稱“2025中國製冷展”）於2025年4月27日在上海新國際博覽中心盛大開幕。在過去十餘年間，憑藉全行業的鼎力支持，製冷展實現了從單純商業展會向集展、技、貿、產、學、研、管、用、媒於一體的國際化綜合性平台的轉型升級，已然成為全球製冷空調科技發展的重要風向標。近年來，隨著大數據和AI技術的興起正在逐步改變製冷空調設備的研發、製造和應用全過程，為產業注入了新的活力，大量滿足新需求的創新性產品和技術在中國製冷展的舞台上不斷湧現，使製冷展也發揮了科技創新的引領作用。香港空調及冷凍商會，作為產業發展的推動者，與香港能源工程師學會（HKAEE）和英國屋宇裝備工程師學會香港分會（CIBSE Hong Kong Region）聯合組織技術交流團，前往上海進行參觀與交流，汲取前沿經驗，為產業注入新活力。



今年，由三會組織的上海製冷展技術交流團吸引了眾多業界精英踴躍參與，總數高達43人。4月26日清晨，團隊自香港國際機場啟程，並於當日下午1時許抵達上海浦東國際機場。集合後，團隊立即前往首個參觀點——“依必安派特”（ebm-papst）位於浦東的新總部及工廠。



這並非團隊首次探訪依必安派特，數年前團隊曾考察過該企業在上海的舊廠，而此次新建成的浦東工廠不僅整合了原有生產線與測試實驗室，更配備了先進的設備，使生產、測試及展示設施全面升級，為團隊成員帶來深刻的專業啟發。晚上，“依必安派特”還特別於團隊住宿的酒店裏面設宴，歡迎香港技術交流團的蒞臨和指導。

席間有個特別亮點——栢泉會長為感謝即將榮休的前會長葉啟賢先生多年來對冷凍商會的卓越貢獻，特意準備了一瓶上等威士忌作為致敬。這份驚喜瞬間點燃了全場熱情，酒至微醺時，葉前會長更是興致勃勃地改用英語與大家談笑風生，讓整場晚宴洋溢著歡樂與溫情。



4月27日上午，團隊各會長及主席出席了“2025中國製冷展”開幕式及論壇活動。入場前，全體成員在主展館前合影留念，記錄這一重要時刻。憑藉預先登記的貴賓入場證，團隊成員順利有序地進入展館。儘管展覽剛開幕，但現場人氣已遠超往屆，熱鬧程度就已創下新高！在會長和主席的帶領下，團隊首先走訪了香港冷凍商會會員展位以示支持，然後自由參觀。



本屆展會以“智聯冷暖、共享未來”為主題，展覽面積達115,000平方米，匯聚了來自32個國家和地區的近1,200家參展企業及40家國際行業組織。展會期間舉辦了80餘場平行會議活動，包括主題論壇、專題研討會及技術交流會，並設有產學融合路演、臭氧氣候技術路演及熱泵專區等特色展區，全方位展示行業最新技術成果與發展趨勢，吸引了超過4.6萬名專業觀眾，盛況空前！當晚，團隊分成兩組：一組參加展會官方接待酒會和晚宴，感受產業盛事；另一部分則參加由“鑫力香港有限公司”（Fortune Links）特別安排的招待晚宴。活動在輕鬆愉悅的氛圍中圓滿結束，所有成員都收穫滿滿。這個充實的夜晚都讓每個人乘興而來，盡興而歸。



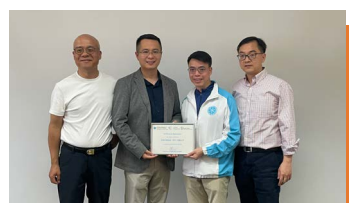
4月28日早上，香港冷凍商會技術代表團展開第三天的專業考察行程。團隊抵達“搏力謀亞太中國”（Belimo）位於上海閔行區的新總部和工廠。廠方專家隨代表團考察介紹搏力謀的各種產品和技術，詳細講解它們的創新之處，代表團成員不時駐足詢問，這氛圍延至午餐會上，雙方仍繼續交流。



下午轉赴“妥思空調設備（蘇州）有限公司”（TROX）的新工廠同樣令人印象深刻。從高效率的生產線和先進的測試實驗室，處處體現著高水準。在隨後的技術交流晚宴上，TROX分享了很多最新市場的發展趨勢。是日考察結束後，團隊前往常熟休整，為明天的精彩行程準備。



行程最後一天（4月29日），代表團完成最後一站技術考察，參訪水泵製造商“格蘭富”（GRUNDFOS）常熟生產基地。格蘭富展示了其創新的水泵解決方案，團隊成員就產品性能、能源效率表現等專業問題與廠方技術人員進行了深入交流。在工廠用畢工作午餐後，團隊隨即啟程前往上海浦東國際機場，搭乘預定航班返港。



這次為期四天的上海冷凍展技術交流活動圓滿結束，獲得全體成員高度評價。團隊期待明年再次參與這項行業盛會。

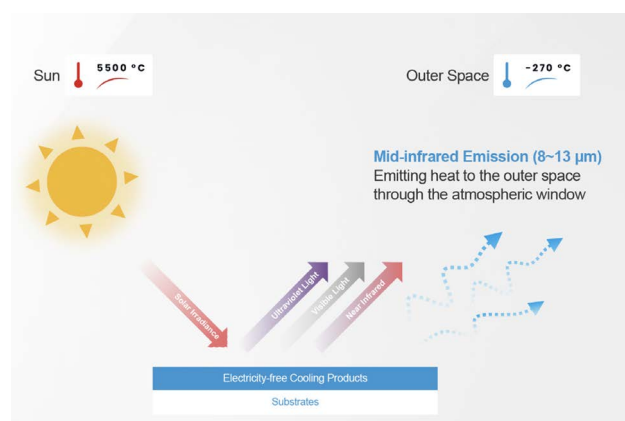
# Electricity-free Cooling Coating: The Future Path Beyond Traditional Cooling Methods

## Addressing Global Energy Challenges with a Sustainable Cooling Solution

In the face of global warming and escalating energy crises, i2Coating (electricity-free cooling coating) have emerged as a zero-energy cooling solution that is moving steadily toward large-scale, real-world adoption. Compared to the high energy consumption and carbon emissions of conventional air conditioning systems, i2Coating leverages innovations in material science to offer a highly efficient and low-carbon alternative. It brings new cooling options for architecture, new energy, logistics sectors and more—delivering outstanding environmental and economic value.

## Harnessing Earth's Natural Processes for Passive Cooling

The core principle behind i2Coating is passive radiative cooling. The Earth's atmosphere has a high transmittance in the mid-infrared band (8–13  $\mu\text{m}$ ), known as the atmospheric window. Utilizing this phenomenon, surface heat of objects on earth can be emitted as mid-infrared radiation into outer space, thereby lowering the object's surface temperature below ambient levels. At the same time, high reflectance across the full solar spectrum (ultraviolet, visible, and near-infrared) helps reflect incoming solar heat. Only surfaces that combine high solar reflectivity with high mid-infrared emissivity can achieve stable, all-day passive radiative cooling.



Our team's electricity-free cooling technology has been published in top international journals such as Science, and is patented across multiple regions, including Chinese Mainland, the U.S., and Hong Kong. It has also obtained multiple product certifications, ensuring its innovation and compliance with industry standards.

## Innovating for Enhanced Performance

Electricity-free cooling coatings typically consist of multilayer composite structures—including bottom coat, top coat and protective coat. Each layer is engineered to reflect sunlight of different wavelength ranges, to boost mid-infrared emissivity, and to enhance durability under harsh conditions. The core breakthrough lies in the integration of polymer matrices with inorganic nanoparticles. This hybrid composition forms a micro-nano structure that scatters the entire solar spectrum efficiently and significantly increases thermal emissivity. Experimental data shows that advanced formulations can achieve over 95% solar reflectivity and over 95% mid-infrared emissivity—exceeding the limits of conventional white paints and thermal insulation coatings.

Our researchers focus not only on improving optical and thermal performance, but also on overcoming challenges related to long-term durability and cost-efficiency. Some high-performing lab materials may suffer from aging, yellowing, or brittleness in real-world outdoor conditions, and the use of expensive raw materials limits scalability. To address these issues, the formulation has been optimized by replacing precious metals with high-performance polymers and commonly available nanoparticles. This not only preserves high cooling performance but also dramatically improves material robustness and cost-effectiveness.

Originally designed for buildings, i2Coating has evolved with industry-specific adjustments in formulation and structure. It is now adapted for industrial equipment, energy facilities, and other diverse environments. Customized for varying substrates, climates, and use conditions, i2Coating provides stable, long-lasting cooling across a wide range of applications.



## Real-World Applications in Diverse Climates and Industries

i2Coating has been successfully deployed across Chinese Mainland, Hong Kong, and the Middle East, including the UAE and Saudi Arabia, in a wide range of settings such as commercial complexes, public buildings, industrial zones, schools, hospitals, and office buildings. At the Hong Kong Coliseum, for instance, a 7,000 sqm i2Coating installation resulted in a noticeable surface temperature drop, reduced AC energy use, and enhanced occupant comfort and operational efficiency. In hot, arid Middle Eastern climates, i2Coating helps cool industrial roofs and storage units, prolonging equipment life and reducing energy costs. These real-world deployments underscore i2Coating's environmental adaptability and economic benefits, establishing it as a key technology in green construction and industrial decarbonization.

<b>Architecture</b>  Guangzhou Huashang College Guangzhou, China (Temperature measured in February 2023) Surface Temperature <b>+42.9°C</b> Energy Saving Rate <b>+39.5%</b>	<b>Logistics</b>  Shipping containers of LHS UAE UAE (Temperature measured in July 2023) Surface Temperature <b>+29.9°C</b> Internal Temperature <b>+6.8°C</b>
<b>Power &amp; Telecom</b>  RMU at Zhangping Industrial Park Fujian, China (Temperature measured in December 2022) Surface Temperature <b>+38°C</b> Internal Temperature <b>+14.9°C</b>	<b>Grain Storage</b>  Grain storages of Sinograin Hainan, China (Temperature measured in February 2022) Surface Temperature <b>+30.9°C</b> Maintenance Costs <b>+25%</b>
<b>Chemical Industry</b>  Storage tanks of Towngas Hong Kong, China (Temperature measured in July 2023) Chemical Fluid Temperature <b>+9°C</b> Cooling Costs <b>+60%</b>	<b>Photovoltaic</b>  PV panels of Citibank Hong Kong, China (Temperature measured in June 2023) Surface Temperature <b>+25.7°C</b> Power Efficiency Rate <b>+8%</b>
<b>New Energy</b>  Energy storage containers of Sunwoods Hong Kong, China (Temperature measured in November 2022) Surface Temperature <b>+34.8°C</b> Internal Temperature <b>+8°C</b>	<b>Automobile</b>  Buses of Citybus Hong Kong, China (Temperature measured in January 2023) Average Temperature <b>+4.6°C</b> Energy Saving Rate <b>+26%</b>

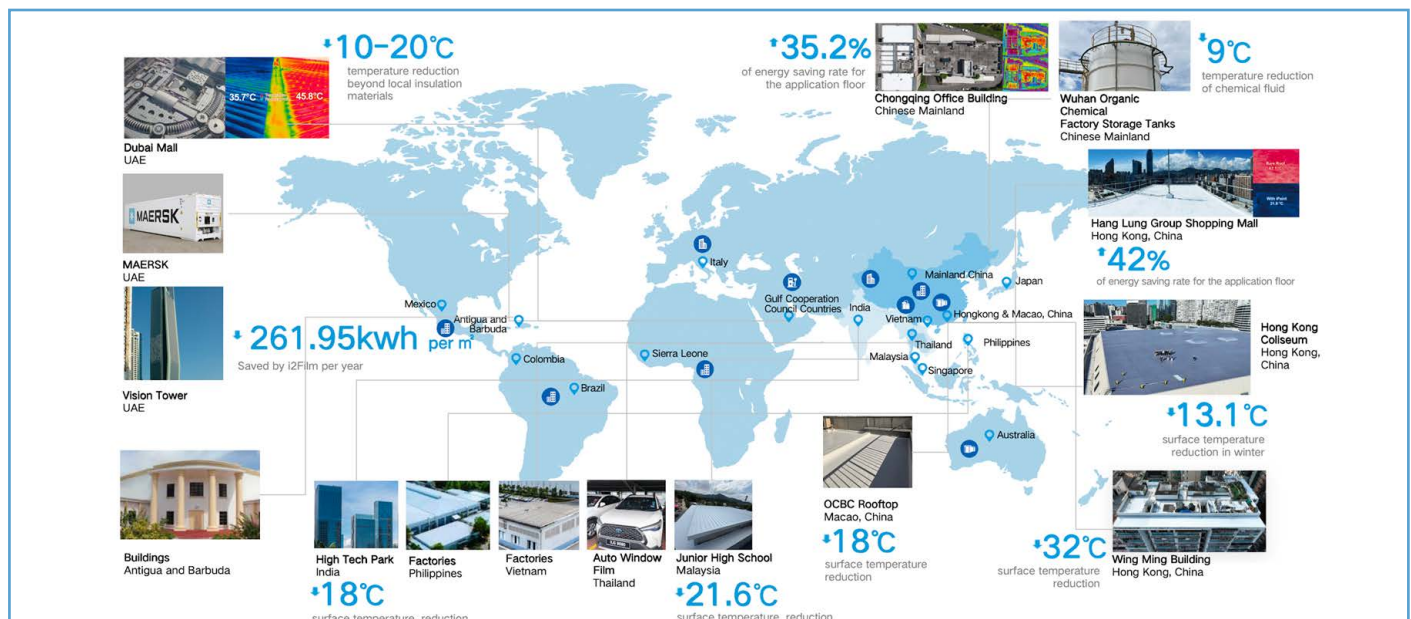
### Diverse Application Scenarios



i2Coating Featured Case: Hong Kong Coliseum - Rooftop



i2Coating Featured Case: Gala Place - Rooftop



## Electricity-free Cooling For a Sustainable Future

i2Coating is gaining global momentum as an essential component in sustainable architecture and urban infrastructure. To date, over 397,863 square meters have been applied, saving 6.8 million kWh of electricity and reducing carbon emissions by 6.1 million kilograms. Beyond coatings, electricity-free cooling technology has also advanced into products such as membranes, textiles, automotive solutions, and ceramics. Meanwhile, the R&D team is exploring emerging applications, including thermochromic smart windows—paving the way for next-generation passive climate technologies. These innovations offer new solutions for decarbonization, energy savings, and a greener, more sustainable future.



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easyCOMFORT



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AHRI-COP up to 6.62,  
AHRI-IPLV up to 11.48



## Constant

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protection



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# OFFERING COMFORT AROUND THE WORLD THROUGH THERMAL SOLUTIONS

## PRODUCTS



### CENTRIFUGAL CHILLERS

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(R134a)

MIC/MIJ

ETI-Z  
(R1233zd)

MIJ

GART-ZEI  
(R1234ze)

MIJ

JHT-YI  
(R1234yf)

MIJ



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The industry's highest COP level  
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**-25°C → 90°C**

90°C water supply even in extremely cold  
regions with temps as low as -25°C

#### CAPACITY

**-7°C → 100%**

Keeping 100% capacity down to -7°C



**Residential  
Air-conditioners**



**Residential Multi Split  
Air-conditioners**



**VRF Multi System  
Air-conditioners**



**Packaged  
Air-conditioners**





# Kai Tak Sports Park



Project Name : Kai Tak Sports Park  
Architect : Populous Limited  
BS Designer : Ove Arup & Partners Hong Kong Limited  
Completion : March 2025  
ACRA Member : Young's Engineering Company Limited  
Member's Role in the Project :  
Design and Construction of the Air-Conditioning and Ventilation Systems

## Project Overview

Kai Tak Sports Park is situated at the former Kai Tak Airport in Kowloon. Spanning over 28 hectares, the new Kai Tak Sports Park (KTSP) is the largest multi-purpose venue in Hong Kong, it consists of three venues, featuring the 50,000-seat Kai Tak Stadium (KTS), the 5,000-seat Youth Sports Ground (YSG) and the Kai Tak Arena (KTA), an indoor sports centre comprising of 10,000-seat Grand Hall and 500-seat Ancillary Sports Hall, and other ancillary/supporting facilities such as Dining Cove, car parking spaces, retails, F&B, outdoor leisure space and commercial area.

With the grand opening and commencement of services on 1st March 2025, the Kai Tak Stadium provides an overall capacity of 50,000 seated spectators for sports events, particularly football and rugby being principal sports, non-sports events (e.g. entertainment, exhibitions, festivals and community gatherings, such as charity walk) and a full range of non-event days for commercial uses. The Youth Sport Ground can hold 5,000 spectators for day-to-day community sports and event uses which are also capable of hosting both local and international sports events (e.g. rugby, football, athletics).

## Technical Highlight

### KTSP District Cooling System

Situated in the Kai Tak Development Area, KTSP capitalized on the opportunity to incorporate a highly energy-efficient air-conditioning system by implementing the District Cooling System (DCS). This approach utilizes chilled water supplied by the DCS, delivered through an underground piping network to KTSP to ensure optimal cooling efficiency and with backup from a second DCS plant to ensure reliability.

The chilled water system for each venue is provided with a dedicated DCS substation, see figure 1. Each substation comprises of heat exchangers, secondary pumps and associated chilled water distribution pipe circuits to serve the dedicated venue.

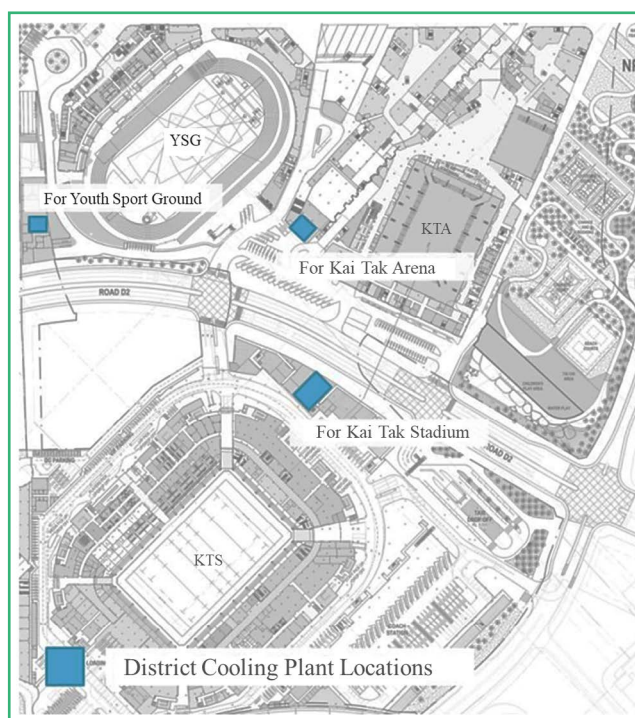


Figure 1 - District Cooling Plant Location

The distribution of chilled water pipes for KTS from the DCS introduces considerable design challenges regarding the routing and coordination with structural elements and other services. This complexity arises mainly from the need to accommodate large-diameter pipes (approximately 700 mm), which to ensure minimize impact on floor structure and foundation design and simplify maintenance access. Finally, a chilled water ring main circuit design integrates with sectional valves is adopted, see figure 2. The chilled water circuits can optimize water distribution, provide flexibility in operation and limit pipe and pump sizes. Each circuit will distribute chilled water from the DCS to cooling equipment within the venue including AHU/PAU cooling coils, computer room air conditioning units (CRAC) and fan coil units (FCU).

The riser design serving individual venue consists of three (3) pipes for chilled water supply/return, providing redundancy for maintenance and enhancing system resilience in the event of a pipe failure. These pipes can be reconfigured to function as either supply or return lines by actuating the motorized isolation valves through CCMS as necessary, see figure 3. In standard operating conditions, the system is configured with one supply pipe and two return pipes. Pressure Independent Control Valves (PICVs) are installed for all branches leading to PAUs, AHUs, and FCU groups etc., thereby minimizing concerns regarding water balancing. Also, the use of two return pipes can reduce the pumping energy consumption and mitigate the risk of pipe aging due to prolong non-used.

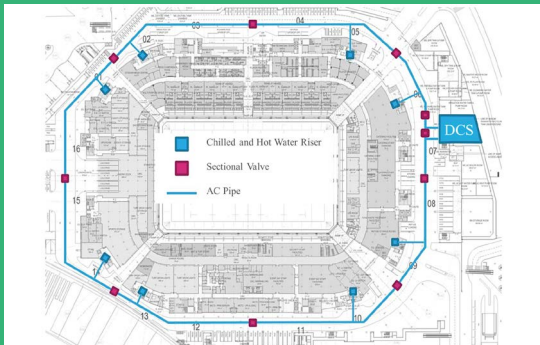


Figure 2 – Distribution Schematic of Kai Tak Stadium Chilled Water (Ring Main Circuit)

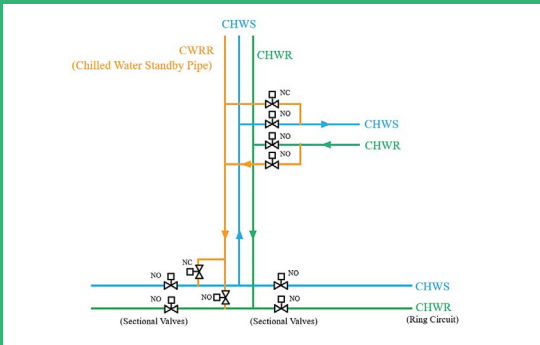


Figure 3 – 3 Pipes Chilled Water Riser

## Kai Tak Stadium - Bowl Cooling & Pitch Cooling

Bowl cooling has been implemented in Kai Tak Stadium to ensure spectator comfort, utilizing both overhead and below seat bowl cooling systems. In the case of KTSP, below seat bowl cooling is preferred for its superior air delivery (buoyance effect) and temperature control, as well as reduced energy consumption and the elimination of high level ducts installation and maintenance.

The bowl cooling system comprises Primary Air Handling Units (PAUs) and Air Handling Units (AHUs) to provide mechanical ventilation, cooling, and heating for specific seating zones of KTS with capacity reaching 50,000 spectators. Conditioned air is channeled from the AHUs to an air outlet at each seat, creating a comfortable air envelope around the spectators.

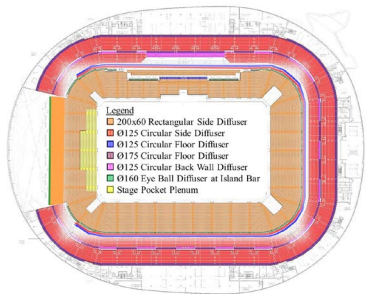


Figure 4 – Bowl Seating Diffuser Type Plan

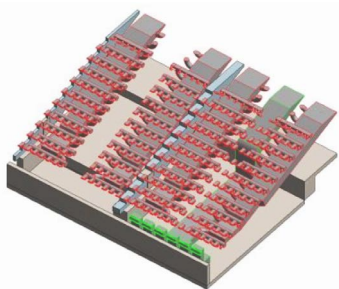


Figure 5 – BIM Model of ductwork/ structure

The seating bowl is divided into air-conditioning zones at each tier to enable effective control of discrete zones, see figure 4. The size of each zone is determined based on the AHU location, practicality of duct routing, and the configuration of seating and tier support structures, with each zone serving approximately 600 seats.

Below seat air supply poses coordination challenges among multi disciplines, including architectural, structural, drainage, fire services, etc., necessitating precise detailing of air handling unit locations, duct routing, and the exact positioning of air outlets at each seat within the precast terrace units. Thus, design, coordination and construction making use of BIM and Design for Manufacture and Assembly (DfMA) plays a crucial role in the integrated design of bowl seating. DfMA not only reduces on-site installation time but also enhances quality and site safety by relocating construction activities to a controlled factory environment. Figure 5 illustrates the BIM model, showcasing the coordination of the sunken extend, bowl seating ductwork and pitch cooling ductwork.

Computational fluid dynamics (CFD) modeling has been conducted to identify the optimal configuration of the under-seat air supply system, see figure 6. The supply air conditioning for base cooling mode of the bowl seating is optimized, with an approximate temperature of 21°C for peak load condition. In contrast to traditional all-air systems, which typically deliver supply air at around 13°C, the bowl cooling system has supply air outlets located in the leg zone, close to the human body. This proximity requires a higher supply air temperature of 21°C for optimal human comfort, setting it apart from the conventional 13°C supply air. The analysis from the CFD model was used to analysis the bowl seating to achieve the design temperature condition of 25.5°C.



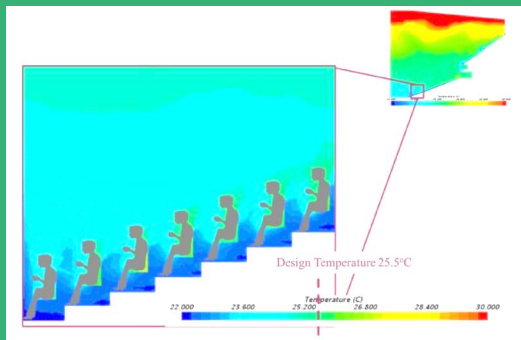


Figure 6 - Bowl Seat Base Cooling Thermal Profile – Lower Tier

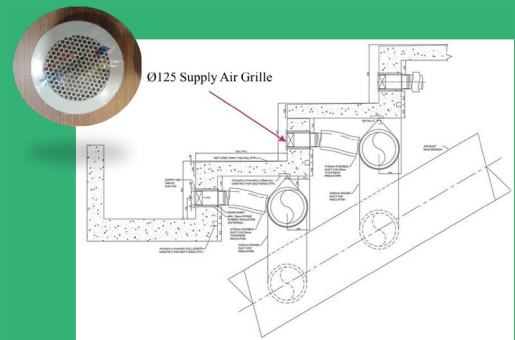


Figure 7 - Typical Supply Air (SA) Outlet Installation Detail for Bowl Seating

On the other hand, pitch cooling is being implemented at Kai Tak Stadium to ensure comfort for spectators standing or sitting on the pitch during concerts or similar events when the stadium roof is closed. Currently, there are no other sports stadiums (with a capacity of 40,000 or more) that offer dedicated pitch cooling for spectator comfort. With consideration of thermal performance, air velocity constraint, acoustic requirements, and the coordination of bowl seating air ducts with the structure and architecture layout, nearly 100 no. drum louvres are installed along both the west and east side of the pitch. Below Figure 8 captures the typical drum louvre model and Figure 9 shows the overview arrangement of the drum louvres.

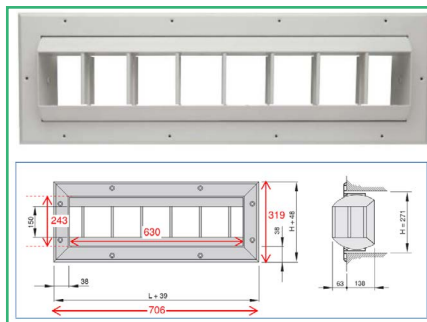


Figure 8 - Drum Louvre Selected

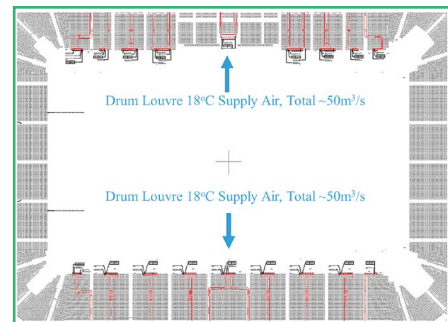


Figure 9 - Overview Arrangement of the Pitch Cooling Drum Louvres

## Kai Tak Arena - Grand Hall Event Modes

Grand Hall featuring a 10,000-seat capacity, is designed for both competition and community sports events. In addition to sports, it will host non-sporting events such as concerts and exhibitions. A moveable seating design is integrated to accommodate both the court and spectators' requirements. The system design considers dedicated air conditioning requirements to suit various event types and their associated occupancy levels including spectators, players and performers, with a peak scenario of 10,000 spectators.

Event Types considered for the system design are:

- Community Use: Basketball
- Basketball Championships
- Badminton
- Tennis
- Volleyball
- Table Tennis
- Futsal/Handball
- Gymnastics
- Boxing
- Concert: Central Stage
- Concert: End Stage Options
- Ice-Rink

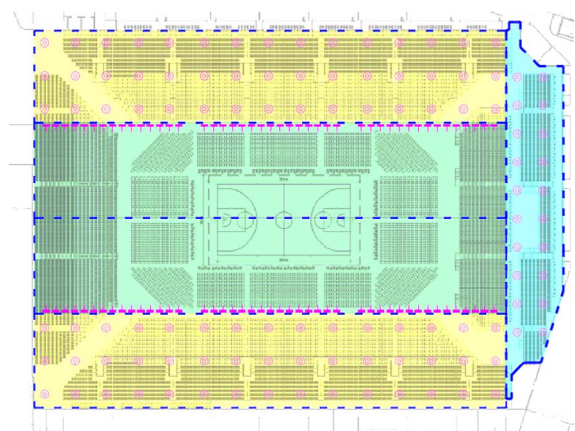


Figure 10 - Design diffuser and zoning arrangement in the Grand Hall

[illegible]

Figure 11 - Activity distribution during the Basketball - Champion event mode

The Grand Hall is supported by 9 no. AHUs and a total of about 200no. diffusers, which are either swirl or drum type. The zoning arrangement is illustrated in Figure 10 with: Community Use;

- Yellow zones – served by swirl diffusers
- Green zones – served by drum diffusers
- Blue zone (fixed seating area) – served by swirl diffusers

For each event mode, a layout plan has been provided, and an exercise has been conducted to overlay the diffusers and assess change in demand (see figure 11). The cooling demand for each event mode has been simulated using computational fluid dynamics (CFD). Each simulation includes different sections to demonstrate the air velocity and temperature profiles during the associated operating mode. The final operation of the plant is designed to align with the CFD simulations, while the overall plant sizing based on desktop calculations to ensure flexibility for adjustments during the commissioning phase.

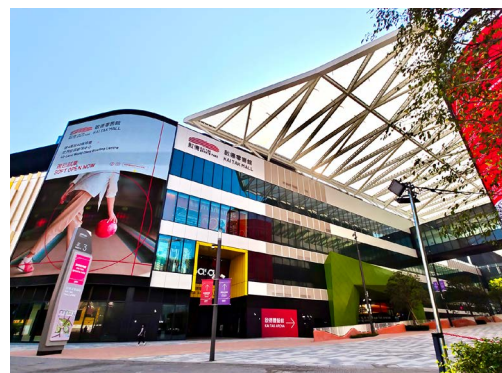
## CCMS Architecture

Central Control and Monitoring System (CCMS) is implemented for the control, monitoring, and energy management of the MVAC plant and systems. The CCMS is a building management system (BMS) that interfaced with the Integrated Operating Centre (IOC) as part of the integrated communications system for the KTSP and fully compatible with all hardware installations.

The CCMS function as a stand-alone system and will be scalable in nature. It consists of distributed Direct Digital Controllers (DDCs), Intelligent Unitary Controllers (IUCs) and Graphical User Interface (GUI) in each building and the key area to perform control and/or monitoring functions. A central server is provided in the primary server room in KTS and secondary server room in KTA.

The CCMS module is designed to cover and monitor the following:

- Sub-meters on the outgoing ways from the electrical switchboards;
- Electricity sub-meters serving the main plant;
- Water sub-meters serving each of the catering areas and each of the tanks;
- Hot water sub-meters;
- Chilled water sub-meters;
- Hot and Chilled water sub-meters serving Bowl Seating and Pitch Cooling systems; and
- Tenants Areas (for each tenant in every building) - Electricity, chilled water & hot water, potable water sub-meters, to allow for billing of tenants' consumption



The CCMS monitoring is adhered to industry standard protocols for metering, including Modbus, M-Bus and BACnet.

In addition to the Air Conditioning System, FSE Engineering Group Limited, the mother group of Young's Engineering Company Limited offers a comprehensive Electrical and Mechanical (E&M) services package for Kai Tak Sports Park. This extensive package includes:

- **Fire Service System**
- **Plumbing and Drainage System**
- **Electrical System**
- **Extra Low Voltage System (ELV) and Information and Communications Technology**
- **Fountain and Water Feature System**

The holistic approach adopted ensures seamless integration and optimal performance and operations across all systems, contributing to Kai Tak Sports Park - a world-class sporting and recreational environment to the community and visitors from Mainland and overseas.

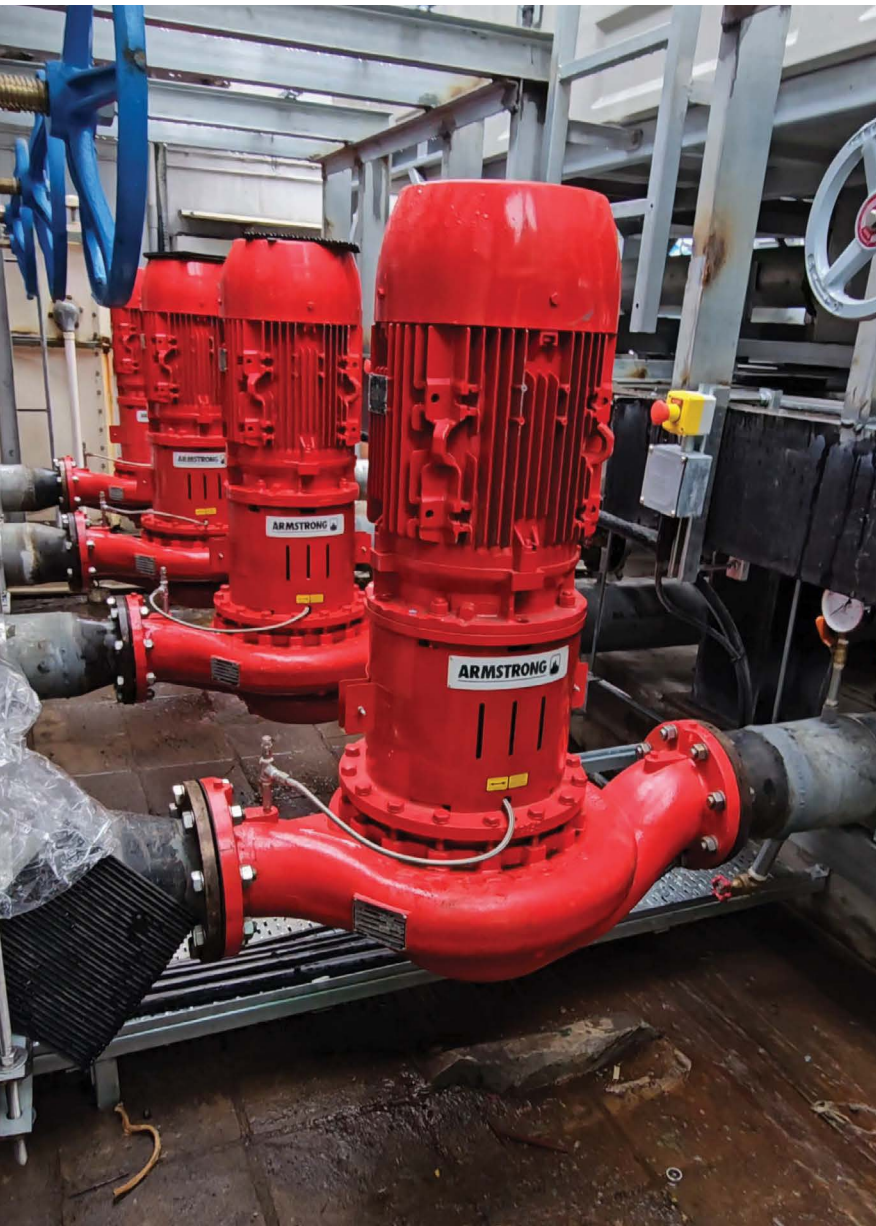
Ms. Belinda Chu / Ir Angus Wong  
Young's Engineering Company Limited







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**鑫輝(國際)有限公司**



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**Products:**

Split Coupled Vertical In-Line Pumps

**Descriptions:**

Armstrong has the best commercial HVAC pump design since 1969. Life cycle value at every turn



**Installation**

Integral components of the pipework

Eliminate:

- Inertial base
- Spring vibration isolator
- Flexible pipe connector
- Field grouting
- Alignment



**Space**

Greatest floor space savings result from less piping and accessories



**Maintenance**

Split spacer couples design allow easy mechanical seal replacement



**Reliability**

Quiet and long-lasting pump operation

- No pump bearing to be serviced
- Minimal operating vibration
- Weatherproofing

**New Business Partner**



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**OXPRIME** is not only a significant supplier of **HVAC** equipment but also a sole distributor of **ESG** manufacturers which have improved the world through innovative and sustainable solutions.



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# ACRA Activities

## E&M Go! 2024

For eight consecutive years, E&M Go! 2024 has been held on 1 November 2024 where industry leaders including our respected council members along with youth committee members have participated in this event to welcome the new engineers for joining the E&M industry assuring their career selection and provide opportunity for them to unlock, develop and stretch their talents and capabilities, innovate with technological knowhow, and mutually create the future for the industry.



## Joint Technical Visit to Kai Tak Sports Park



On 16 November 2024, ACRA together with EMCA and FSICA conducted a joint technical visit to the historically most impressive sports venue in Hong Kong – Kai Tak Sports Park which is located on the north western part of the former Kai Tak Airport with an area of around 28 hectares. This mega-size and multi-purposes sports venue featured with a 50,000 seats main stadium with a retractable roof and bowl cooling system for seating area, an Indoor Sports Centre with 10,000 seats and a Public Sports Ground with 5,000 seats.

It supports to promote not only major international sport events but also entertainment events such as universal music concerts, etc. to attract visitors from around the world so as to enhance the tourism industry. Apart from sport venues, there are park facilities and ample public space for events and leisure to offer full essential platform for diverse needs.

A total of 40 industry professionals have participated in this visit to discover the overall design and key features of main stadium and indoor sports centre, innovative BS installation methods as well as digitalization of BIM + Integrated Information Management Platform of this remarkable project.

## ACRA 63<sup>rd</sup> Anniversary Dinner

The magnificent 63<sup>rd</sup> ACRA Anniversary Dinner was hosted at Crown Plaza Hong Kong Kowloon East on 25 November 2024 having Ir Raymond Poon, Deputy Director of Electrical and Mechanical Services Department, as the guest of honour to celebrate with us for the successful development of air conditioning industry. Our esteemed President, Ir Dr. Pachu Leung and Chairman, Mr. David Chui also delivered valuable speeches on the contribution ACRA implemented for the past year as well as the future opportunities for the industry. With the exceptional support of all council members, industry professionals and stakeholders, ACRA will continue to the devotion of creating more potentials for the air conditioning industry with innovation and sustainability for a more prosperous future.







## ACRA Bowling Competition 2024 – York Choi Cup

One of our most thrilling sport events, the ACRA Bowling Competition sponsored by York Choi was brilliantly concluded on 6 December 2024. It was a wonderful evening to witness the participated bowling players to demonstrate their flawless striking skills competing for the championships.

## Joint Caring Event 2024 - Happy Bags Delivery to Elderly

ACRA is committed to pursue in promoting corporate social responsibility for the community. Our annual significant caring event – Happy Bags Delivery jointly organized with Open Door Ministries and HKFEMC has once again been held on 11 January 2025. Special thanks to our Caring Committee Chairman, Mr. Raymond Synn, as well as all participated members for their tremendous support of accomplishing the mission of distributing a total of 100 bags of rice and household items to the low-income elderlies residing at Lam Tin.



## ACRA Spring Dinner 2025

With the commencing for the Chinese New Year of Snake, ACRA has hosted the Spring Dinner at Kowloon Bay on 7 March 2025. This delightful event was filled with pleasure in the relaxing atmosphere for all participated members to network with one another whilst enjoying the scrumptious delicacies, games and lucky draw. What's more electrifying was the first singing contest of ACRA was held attracting various high-quality singers for this tight competition. It was certainly one of the most amusing occasions of ACRA.





## E&M Expo 2025

Organized by EMSD and Hong Kong E&M Trade Promotion Working Group, the E&M Expo 2025 was held on 7 March 2025. This is one of the foremost events which ACRA provides all-embracing support for the promotion of the E&M industry to the young people so that they could better understand the career development in the air conditioning industry from the experience and knowledge sharing by our proficient council members. This year, the event introduced the revolutionary "Digital Twin", an AI monitoring system, illustrating to the young guests that the latest E&M industry deploys innovative platform run by AI through building system and IoT sensor to collect various data in real-time such as temperature and energy consumption to enhance the building management.



## ACRA Golf Day 2025 – Luen Ming Cup

On 14 March 2025, ACRA Golf Day – Luen Ming CUP was organized at the Huizhou Xinghe Shanhai Peninsula Golf Club. As the most popular sport event of ACRA, it received overwhelming response from numerous members in the industry with outstanding golfing skills to participate in this exciting tournament outside of Hong Kong.

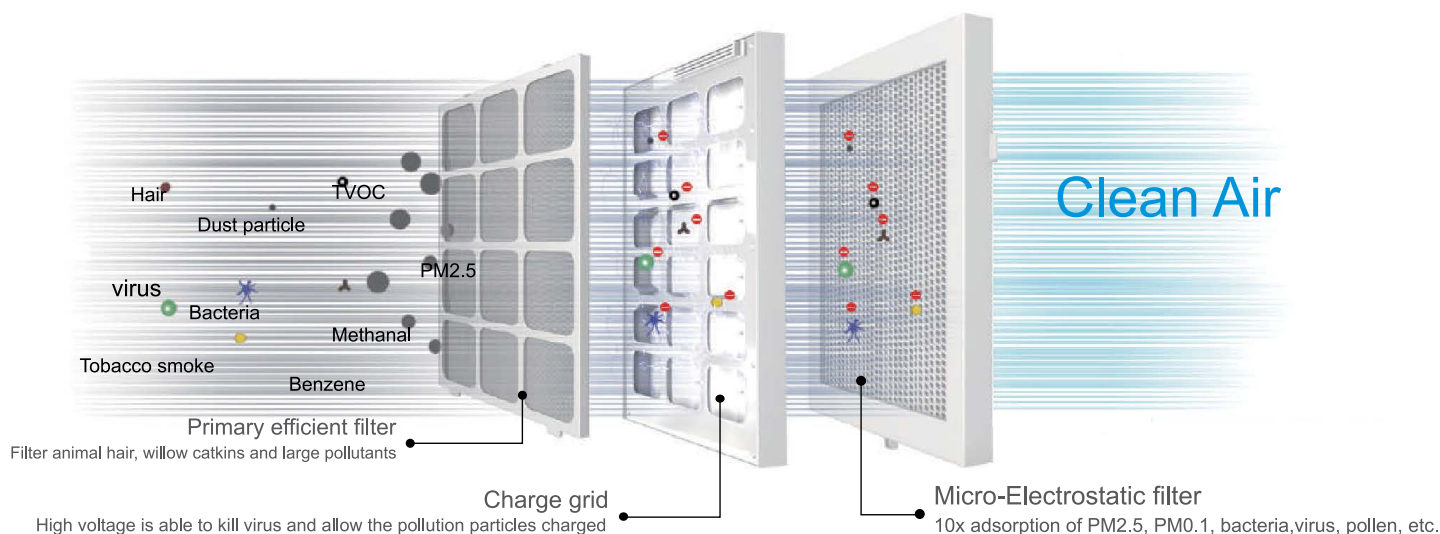
## ODM Fund Raising Event

The ODM Fundraising Event organized by Open Door Ministries (ODM) was held on 23 March 2025 with the objective of maintaining the operations of Open Door Ministries serving the residents in need at Lam Tin district. In order to win in this event with the theme of "Happy Community and Harmonious Families", contestants had to compete in exercise challenges requiring team work between family members and neighbours. Thanks our members supported this meaningful event. Additionally, gratitude expressed to Midea through its genuine sponsorship to Open Door Ministries with new air conditioners due to the malfunction of the old units.





## Micro-Electrostatic sterilization purification



### • Energy Saving Low Pressre Drop

Air resistance is less than 10Pa (FFC), which can save more energy, protect fan coil or AHU surface air cooler, and prevent filth blockage of coil from damaging effect of heat exchange and temperature control. Reduce 50%~60% energy than traditioal filter.



• **Washable Filter**  
"Micro-electrostatic" Technology,  
And Repeated Washing In 10 Years  
Adsorb over 99% of PM2.5  
0 material consumption, repeated washing of Micro-Electrostatic filter, large adsorption area and high dust holding capacity.



### • High Efficiency Kill Virus And Adsorb Smaller Harmful Particles (eg.COVID19)

Remove 99% of particles in the air, and adsorb pollution particles of 0.01  $\mu\text{m}$ ; kill influenza virus in an electrostatic way.



### Achieve MERV14 Standard by ASHRAE

(Minimum Efficiency Reporting Value)

Typical controlled contaminant : Bacteria, droplet nuclei (sneeze), smoke and insecticide dust, face powder, paint pigments

## Job References



ICC



The Millenitty



Habour North



NOVO LAND

## Adoption



Fan Coil Unit (90mm thickness)



AHU/PAU (150mm thickness)



▲ Other Job reference

\*Adopted projects will be qualified for WELL and LEED Certification.



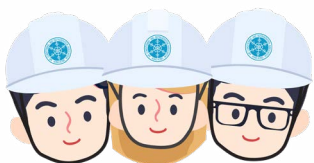
HKGBC  
BEAM Plus  
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Experience Sharing Interview with  
The HKIE Mechanical Discipline Advisory Panel - Ir CK LEE and Ir CK TAM

## Equip Ourselves for Geared-Up Future Challenges Ahead



We are delighted to have the **Chairman (Ir CK LEE)** and the **Deputy Chairman (Ir CK TAM)** of The Hong Kong Institution of Engineers Mechanical Discipline Advisory Panel (HKIE MCL DAP) participate in an experience-sharing interview for the ACRA Newsletter Summer 2025 edition. This initiative is designed to foster connections between experienced professionals and young engineers, providing valuable insights into the industry. The interview delved into various topics, including the process of becoming a HKIE member, tips for preparing for professional interviews, and strategies for overcoming future challenges. This Q&A summary encapsulates the key insights gleaned from the interview, offering valuable guidance and motivation for young engineers as they embark on their professional journeys.

### 1 Preparing for the Interview



*What are some important but often overlooked aspects of interview preparation? Can any practical tips and experiences be shared?*



In addition to preparing professional knowledge and familiarizing oneself with the projects one is responsible for, attention should be paid to the following aspects:

- Professional Image: Appropriate attire should be chosen to project a professional image.
- Communication Skills: Practice should be done to ensure clear and confident communication.
- Project Details: Detailed explanations of the projects one has worked on should be prepared.
- Technical Terms: Familiarity with technical terms related to one's field should be ensured.
- Teamwork: Experience and skills in teamwork should be highlighted.

#### Practical TIPS



- ★ Mock Interviews: Mock interviews should be conducted with friends or mentors to practice answering questions.
- ★ Review Projects: A portfolio of projects one has worked on, including challenges and solutions, should be prepared.
- ★ Technical Knowledge: Regular updates on technical knowledge and staying informed about industry trends should be done.
- ★ Questions to Ask: Thoughtful questions to ask the interviewers should be prepared, demonstrating interest and engagement.

### 2 Managing Interview Nervousness



*What advice can help candidates better manage nervousness during interviews and perform at their best?*

- Preparation: Thorough preparation should be done to boost confidence and reduce nervousness.
- Breathing Techniques: Deep breathing exercises should be practiced to stay calm.
- Positive Visualization: Visualizations of performing well during the interview should be done.
- Focus on the Present: Concentration on the current moment rather than worrying about past mistakes or future outcomes should be maintained.
- Practice and Feedback: Multiple mock interviews should be conducted and feedback should be sought to identify areas for improvement.

### 3 Advantages of MHKIE Membership



*Mechanical Discipline Membership Apart from applying through IMechE, becoming a registered engineer through HKIE membership is another path to professional qualifications. What advantages does MHKIE offer?*

- Becomes a Registered Professional Engineer (RPE): Attaining the status of a RPE, showcasing expertise 25 to 30 statutory empowered responsibilities, and commitment to the engineering profession.
- Industry Influence: The substantial influence of MHKIE in influencing industry norms and regulations.
- High Recognition: High recognition both internationally, such as RRA with IMechE, SOE, CIWEM, IEAust and across mainland China.
- Professional Network: Availability of a professional network and valuable resources.
- Career Development: Pathways for career development and enhancement.
- Support Services: Services like training initiatives and mentorship programs.



## 4 Enhancing the Professional Status of Mechanical Engineers



*How can the professional status of mechanical engineers be consolidated and their professional development supported?*

- Continuous Education: Encouragement of continuous learning and professional development should be promoted.
- Certification Programs: Development and promotion of certification programs to enhance professional standards should be undertaken.
- Industry Collaboration: Strengthening of collaboration with industry partners to align education with market needs should be done.
- Public Awareness: Increasing public awareness of the importance and contributions of mechanical engineers should be pursued.
- Policy Advocacy: Advocacy for policies that support the professional development of mechanical engineers should be carried out.

## 6 Addressing Qualified Engineer Requirements



*Addressing Qualified Engineer Requirements In some MCL-related trades under DevB CMH, the required Qualified Engineer is often BS rather than MHKIE MCL Discipline. How should this be viewed?*

- Differences in Professional Scope: MCL (Mechanical) and BS (Building Services) have distinct scopes and focuses. MCL primarily specializes in mechanical systems, plants and equipment for any applications including water treatment, waste treatment, power plant, transportation, manufacturing, stage engineering, building, etc. It offers a deep expertise in mechanical engineering principles and applications, ensuring precision in mechanical system design and operation.
- Market Demand and Project Requirements: While BS qualifications may be sought for certain building projects, the expertise of MCL Discipline engineers is invaluable in trades requiring a strong foundation in mechanical engineering. Projects that demand meticulous attention to mechanical systems benefit greatly from the specialized knowledge and skills of MCL-qualified engineers.
- Choosing the Right Qualification: Engineers dedicated to mechanical engineering excellence and seeking proficiency in mechanical system design should prioritize the MCL Discipline qualification. This designation signifies a high level of competence and specialization in mechanical engineering principles, making MCL-qualified engineers well-equipped to tackle complex mechanical challenges with precision and expertise.

## 5 Supporting Engineers to Practice in the Greater Bay Area



*What pathways are available to assist mechanical engineers in obtaining professional qualifications to practice in the Greater Bay Area?*

- Professional Title Evaluation (職稱評價機制): Through successful completion of the professional title evaluation, corresponding engineering professional title qualifications in the mainland can be obtained by Hong Kong engineers. This includes titles such as 「正高級工程師」、「高級工程師」、「工程師」and「助理工程師」. This evaluation mechanism is a significant breakthrough in aligning professional qualifications between the two regions.
- Filing System (備案制度): This system allows documents to be filed by consultants from Hong Kong government's selection committees and registered professionals from related professional registration authorities in Hong Kong with mainland departments. By doing so, corresponding qualifications in the mainland can be obtained, enabling practice in the cities of the Greater Bay Area.

## 7 Knowledge in AI and Big Data



*With the development of AI and big data, is the knowledge of mechanical engineers sufficient to meet industry demands?*

The knowledge of mechanical engineers needs to be supplemented to meet the demands of AI and big data. Key strategies include:

- Professional Title Evaluation (職稱評價機制): Through successful completion of the professional title evaluation, corresponding engineering professional title qualifications in the mainland can be obtained by Hong Kong engineers. This includes titles such as 「正高級工程師」、「高級工程師」、「工程師」and「助理工程師」. This evaluation mechanism is a significant breakthrough in aligning professional qualifications between the two regions.
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## 8 Adapting to MiMEP Trends



*As the government promotes MiMEP to enhance efficiency in electromechanical works, what knowledge should engineers acquire? Are there corresponding training programs?*

- **MiMEP Knowledge:** Engineers should learn about MiMEP principles, standards, and implementation methods.
- **Professional Development and Training:** Continuous professional development is essential. Engineers should stay updated with the latest advancements and best practices in the field of air conditioning and refrigeration through training programs and industry seminars.
- **Practical Application:** MiMEP knowledge should be applied in projects. Hands-on experience is essential for mastering the practical aspects of MiMEP and ensuring its effective implementation.



## 9 Achieving Carbon Neutrality



*How can engineers contribute to achieving carbon neutrality by 2050, particularly in air conditioning and refrigeration systems?*

The discussion emphasized the broader role of engineers in contributing to environmental sustainability and carbon neutrality, rather than focusing solely on technical solutions for air conditioning and refrigeration systems.

- **Personal Responsibility and Passion:** Engineers should approach their work with a sense of personal responsibility and passion. This includes recognizing the impact of their work on the environment and society, and taking proactive steps to minimize negative effects.
- **Professional Conduct and Influence:** Engineers have a role beyond just technical execution. They should influence and inspire others, including colleagues, clients, and the community, to adopt sustainable practices.
- **Holistic Approach to Sustainability:** Engineers should consider the broader implications of their work, including the environmental impact of the systems they design and maintain. This includes being mindful of the materials used, the energy efficiency of systems, and the overall lifecycle impact.
- **Education and Advocacy:** Engineers should educate themselves and others about the importance of sustainability and carbon neutrality. This includes staying informed about the latest developments in sustainable technologies and practices, and advocating for their adoption within the industry and beyond.

## 10 Encouragement for Young Engineers



*What words of encouragement do you have for young engineers?*

**Ir CK LEE**

- **Value of Experience:**

For an engineer, experience stands out as the most precious asset. Even if the salary is modest in the initial stages, the acquired experience is priceless, forming a robust groundwork for future career advancement.



- **Career Development and Patience:**

Taking time to accumulate experience and achieve professional growth. He advised young engineers to be patient and to see the long-term benefits of gaining experience, even if it means starting with lower salaries. Implying that the industry's growth will eventually benefit those who have invested in their careers.

- **Long-Term Perspective:**

Having a long-term perspective while the initial years may be challenging, the experience gained will open up more opportunities and higher responsibilities in the future.



**Ir CK TAM**

- **Quality and Professionalism:**

The importance of maintaining high quality and professionalism in one's work. Engineers should focus on delivering quality work, as this will give them the power to negotiate better terms and opportunities in the future.



- **Continuous Learning and Adaptability:**

Both interviewees highlighted the need for continuous learning and adaptability. They encouraged young engineers to stay updated with the latest industry trends and technologies, and to be prepared to adapt to changing demands.



# 無滴汗風咀



冇倒汗水的風咀。

防結露測試：Delta T 14.7°C at 93% (RH)

\* BS476: Part 6 ; BS476: Part 7

符合香港消防局要求

專利設計

NYLON 66

**SWEATLESS DIFFUSER**

Anti-condensation



## 工程項目：

九龍公園探知館, 香港機場辦事處, 香港商用航空中心, HACTL 香港空運站, 赤柱懲教訓練學院, 沙田馬場, 逸東酒店, 九龍醫院, 聯合醫院, 威爾斯醫院, 金鐘太古廣場, 萬國殯儀館, 荃灣柏傲灣, 朗豪坊, 德福商場, 大圍, 車公廟路, 柏傲莊, 香港木球會, 大角咀匯豐中心, 金鐘PPMALL L5 HOTEL, CORRIDOR, 海翩匯L26

# WIN POWER

## SCR (無斷式)功率控制器



## 工程項目：

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哈羅香港國際學校  
屯門醫院  
陽明山莊  
黃道益  
香港大學



# DDS 不銹鋼電熱管



## 工程項目：

香港大學、香港中文大學  
香港賽馬會  
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港怡醫院  
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澳門銀河(1-3期)



# SUPAFLEX® 美佳軟性風管

## Supaflex Flexible Duct



## 工程項目：

將軍澳入境事務大樓  
啟德體育園  
港怡醫院  
庫務大樓  
沙田威爾斯親王醫院  
西九文化區



## Technical Seminar on Fresh Water Cooling Towers Scheme

The seminar shares the latest updates on Fresh Water Cooling Towers (FWCT). Known for their impressive energy efficiency, these systems have become a popular choice in Hong Kong, and we can't wait to delve into their developments!



Joining HKIE MMNC Annual Dinner



ECA Christmas Party

## Connections with Industry

Besides regular meetings and events, we organized social events among youth members. Join us and achieve more together in the industry.



ECA Christmas Party



2025 E&M EXPO



Honorable Guest Speaker  
for the THEi

## Joint Caring Event 2024

In association with HKFEMC, we are continuously involved in Happy Bags Delivery to Elderly. Thanks to the generous sponsorship and support from our member companies, we're spreading care and warmth to those in our community.



## Sports Competition

Over a hundred participants showcased their talents on the sports courts, and it was a fantastic display of charm and camaraderie! A huge thank you to all our sponsors and supporters for making these events possible.



IES Cup ACRA Badminton Competition 2025



York Choi Cup Bowling Competition 2024



# Zenith International Enterprise Limited



## EBARA Horizontal Split Casing Pump – New Model CB Series

- New hydraulic design to achieve high efficiency for energy savings
- Lower energy consumption, motor output and more compact size
- Shielded bearings to minimize maintenance

*Looking ahead, going beyond expectations*

*Ahead > Beyond*



**Pressure Vessel**



**Plate Heat Exchanger**



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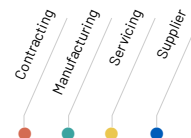
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info@zenith-int-ent.com

Room A, 19/F, E-Trade Plaza, 24 Lee Chung Street, Chai Wan, HK

# Membership List



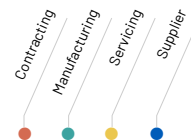
	Company Name		Contact Number	Website / Email	Trade				
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	Fook Loong (HK) Limited	福隆(香港) 有限公司	2393 7773	www.flhk.com.hk					
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	Takasago Thermal Engineering (Hong Kong) Company Limited	高砂熱學工業(香港)有限公司	2520 2403	sales@takasago.com.hk					
	Technicon Engineering Limited	得力確工程有限公司	3193 1300	technic@technicon.com.hk					
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	A & R Engineering Company Limited	奇樂工程有限公司	2408 2960	general@arengco.com.hk					
	Aires Engineering Company Limited	毅力機電工程有限公司	2658 8856	adrianwong@aires.com.hk					
	Alfa Laval (China) Limited	瑞典阿法拉伐(中國)有限公司	2589 3859	www.alfalaval.cn					
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	A Shing Engineering Company Limited	亞成冷氣工程有限公司	2537 1818	wilkiengan@ashing.com.hk					



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	Enviro-Tech Engineering Company Limited	鷹達工程有限公司	2827 0688	crystal@envirotech.com.hk			
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	Everest Air-Conditioning Engineering Company Limited	鼎峰冷氣工程有限公司	3460 4727	gabrielkwan@everest.com.hk			
	Evergreen Environmental Technology Company Limited	冬青環保科技有限公司	2562 3331	www.evergreen-environmental.com			
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	Far East Engineering Services Limited	遠東工程服務有限公司	2898 7331	www.fareast.com.hk			
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	Four Ways Engineering Co	四通工程公司	2426 7838	loicheung@yahoo.com.hk			
	Gainfine (E&M) Engineering Company Limited	佳輝機電工程有限公司	3547 0699	gainfine@gainfine.com /			
	GTECH Services (Hong Kong) Limited	英國通用工程(香港)有限公司	2123 0888	www.gtechservices.com.hk			
	GELEC (HK) Limited	香港通用電器有限公司	2919 8399	www.gelec.com.hk			
	Gether-Force Air-Conditioning Engineering Company Limited	群力冷氣工程有限公司	2890 2622	admin@getherforce.com			
	Getwick Engineers Limited	佳域工程有限公司	2893 3600	getwick@getwick.com			
	Glory Air-Conditioning Limited	天恩空調有限公司	3487 9092	wallace@gloryacld.com			
	Golden Leaf International (Hong Kong) Limited	金葉國際(香港)有限公司	2648 1000	kennyip@glint.com.hk			
	Goodway Electrical Engineering Limited	佳濤電業有限公司	2405 0888	www.goodwaygrille.com			
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	Hensen System Engineering Limited	豪信系統工程有限公司	2884 9001	info@hensen.com.hk			
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	Hofmann Construction Material Limited	香港好夫曼建材有限公司	3157 1841	www.hofmannhq.com			
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	Horry (Hong Kong) Industrial Limited	科睿(香港)實業有限公司	5100 8361	www.hmimpep.com			
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	Intelligent Technologies Limited	毅智科技發展有限公司	2301 4868	info@intelligent-net.com				●
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	Kamui Cold Chain Engineering & Service Limited	淦鐸冷鏈工程服務有限公司	2554 6666	admin@kamui.hk	●		●	
	Keio Engineering Company Limited	京王工程有限公司	2695 8872	www.keio.com.hk	●			
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	Long Yue (Asia) Advisory Limited	朗悅(亞洲)顧問有限公司	5920 0359	www.longyuehk.com	●			
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	Luen Fat Air Condition (Holding) Trading & Engineering Company Limited	聯發冷氣(集團)貿易工程有限公司	2345 0280	www.luenfat.com				●
	Luen Ming E & M Engineering Limited	聯明機電工程有限公司	2636 7168	phylischan@luenmingem.hk	●			
	Luen Ming Pengshan Air Conditioning Factory Limited	聯明坪山冷氣製品廠有限公司	2797 2168	www.luenming.com				●
	Man Tung Air-Conditioning E & M Limited	萬通冷氣機電有限公司	3165 8698	www.manshungroup.com.hk	●			
	Mason Industries (HK) Limited	梅森實業有限公司	2967 9639	www.mason-hk.com				●
	Maxwell Electrical Asia Limited	美基電器亞洲有限公司	3583 5088	www.maxwell-asia.com		●	●	
	Mesan Fiberglass Engineering (International) Limited	明新玻璃纖維工程(國際)有限公司	2787 5717	www.mesanct.com		●		
	Mitsubishi Electric (Hong Kong) Limited	三菱電機(香港)有限公司	2510 0555	www.mitsubishielectric.com.hk				●
	Mitsubishi Heavy Industries (HK) Limited	三菱重工業(香港)有限公司	3526 3186	www.mhi-hk.com		●		
	NAP Acoustics (Far East) Limited	NAP 聲學工程(遠東)有限公司	2866 2886	www.napacoustics.com.hk	●	●	●	●
	Nanofil Filtration Technology Limited		3708 1838	www.nanofil.com.hk		●		
	Nation Engineering Corporation Limited	力信工程企業有限公司	2728 2955	info@nec-hk.com	●	●	●	●
	New Way Engineering Company Limited	新法機械有限公司	2325 6892	www.newway.com.hk				●
	O-Link Limited	奧聯(國際)有限公司	2619 8888	www.o-link.com.hk		●		
	Oxprime (International) Limited	鑫輝(國際)有限公司	2590 8088	info@oxprime.com				●
	Paul Y. (E & M) Contractors Limited	保華機電工程有限公司	2831 8338	www.pyengineering.com	●			
	Pekko Engineers Limited	柏高工程有限公司	3973 0698	www.leightonasia.com	●			
	Power Tech IPC Company Limited	科力發展有限公司	3105 3928	www.powertechipc.com			●	●
	Powers Technical Services Limited	寶華技術服務有限公司	2770 2110	sosaitung@gmail.com	●			
	PIM International Technology Limited	品通國際科技有限公司	6476 5400	wangyb@pimtech.group	●	●		
	Practical Engineering (Hong Kong) Company Limited	百利高工程(香港)有限公司	2402 2772	practical@practical.hk	●			●
	Precision Engineering Services Limited	惠確工程服務有限公司	3656 7777	www.wec.com.hk			●	
	Professional Electrical Engineering Company Limited	專業電機工程有限公司	2665 4321	www.proeecl.com	●		●	
	Pyrofoe Engineers Limited	衛安工程有限公司	2388 8038	www.pyrofoe.com.hk	●			
	Ready Electrical Metal Work Limited	全達電器金屬製品有限公司	2898 8623	kw_leung@ready-group.com	●	●		
	REC Green Technologies Company Limited	盈電環保科技有限公司	2619 8817	www.rec-gt.com			●	●
	Ritech Engineering & Supply Company Limited	偉達工程材料有限公司	2410 1819	www.ritech-hk.com				●



# Membership List

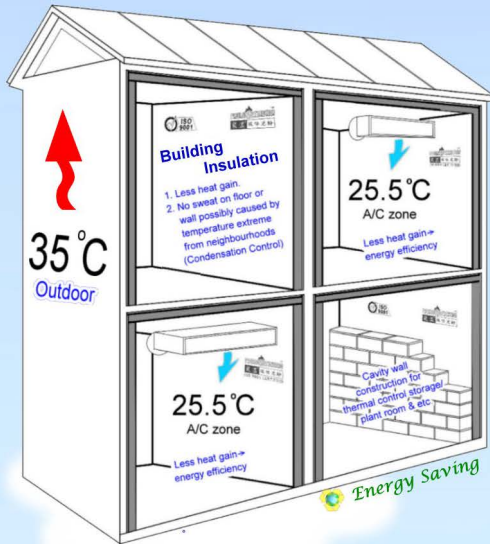


Company Name	Contact Number	Website / Email	Trade
San Yik Air Conditioning Engineering Company Limited	新益冷氣工程有限公司	3565 5812	www.sanyikgroup.com
Sanby Trading Company Limited	聖備貿易有限公司	2573 4219	www.sanby.com
Samsung Electronics H.K. Company Limited	三星電子香港有限公司	2862 6300	www.samsung.com.hk
Satchison Engineering Limited	長和工程有限公司	2357 9382	joey@satchison.com.hk
Schneider Electric IT Hong Kong Limited	施耐德電氣信息技術香港有限公司	2579 2066	https://www.se.com/hk/en/
Shenling Environmental Systems (Hong Kong) Limited	申菱環境系統(香港)有限公司	2603 0002	www.shenling.com
Shenzhen Qianhai Energy Technology Development Company Limited	深圳市前海能源科技發展有限公司	5578 1902	www.szqhenergy.com
Shun Hing E & M Engineering Limited	順興機電工程有限公司	2387 2882	project@shunhingeng.com
Shun Hing Electronic Trading Company Limited	信興電器貿易有限公司	2733 3888	www.shunhinggroup.com
Shun Hing Electric Service Centre Limited	信興電器服務中心有限公司	2406 5333	www.shunhing-service.com
Shun Tung Engineering Company Limited	順通冷氣電機工程有限公司	2633 6866	info@shun-tung.com
Sing Kin Limited	陸建有限公司	2333 1518	singkin@gmail.com
Smartech HVAC & Engineering Limited	智能空調工程有限公司	2521 9768	info@smartech-hvac.com.hk
Sun Chun (E & M) Engineering Limited	新駿(機電)工程有限公司	3613 0755	info@sunchuneng.com
Sun First International Limited	昇福國際有限公司	2807 7888	www.sunfirst.com.hk
Sun Yu Chau Engineering Company Limited	新宇宙工程有限公司	2345 9355	www.sycengg.com.hk
Sundart (M&E) Ltd.	承達機電工程有限公司	2493 9368	sme@netvigator.com
Sunny Fire Engineering Limited	華輝建材有限公司	2395 6766	neweverwelltd@gmail.com
Sun Ying Prefab Products Limited	新鷹預製件有限公司	2547 7877	www.sunying.com.hk
Superpower Pumping Engineering Company Limited	力霸水泵機械工程有限公司	2745 3562	www.sppump.com
Tak Cheong Air-Con. Equipment Supply Company Limited	德昌冷氣設備供應有限公司	2310 0011	www.tcaircon.hk
Sustainable Energy Limited	恆澤節能有限公司	2332 3077	www.sustaine.com.hk
Target Energy Solutions Limited	達標能源管理有限公司	2345 0298	www.targetensol.com
Teembase Development Limited	天基發展有限公司	2554 6263	www.teembase.com
The Hong Kong & China Gas Company Limited	香港中華煤氣有限公司	2963 3452	www.towngas.com
Tinwood Pacific Limited	天匯太平洋有限公司	3956 9751	www.sinro.com
Tom's Equipment Company Limited	義隆設備有限公司	2757 5539	ray@toms-equipment.com
TICA-SMARDT Hong Kong Limited	天加思茂特香港有限公司	2772 8448	francis.yeung@smardt.com
Tin Sing Chemical Engineers Limited	天成化工有限公司	2619 8858	www.rec-tsc.com
TROX Hong Kong Limited	妥思香港有限公司	2861 2261	www.troxapo.com
Tung Shing Hardware Company Limited	東成五金有限公司	2626 9983	www.tungshinghardware.com.hk
Union (Luen Hop) Refrigeration Company Limited	聯合冷氣工程有限公司	2627-4600	wylam@unionhk.hk
United Controls (Hong Kong) Limited	統一儀器(香港)有限公司	2556 1001	www.ucl668.com
Victaulic Hong Kong Limited		6898 6823	www.victaulic.com
Victory Engineering Service Company Limited	維陞工程有限公司	2979 4068	pamela@ves.hk
Viewco Building Services & Engineering Company Limited	偉保工程有限公司	2543 0610	engineering@viewco.com.hk
White Hippo Limited	白河馬企業有限公司	2303 1318	www.kshop310.hk
Wilco Engineering Limited	駿陶工程有限公司	2344 7725	info@wilcoenghk.com
Wing Shing Air-Flow Company Limited	永盛風咀製品廠有限公司	2792 6331	margaret.leung@wingshing-hvac.com
WinTech Century Company Limited	宏達世紀有限公司	2760 4883	www.tanda.info
Wise Corporate (Hong Kong) Limited	匯思集團(香港)有限公司	3705 8947	ErnestL@wisecohk.com
Wo Lee Steel Company	和利鋼鐵有限公司	2393 0131	www.wolee.com
Wo Kee Hong Limited	和記電業有限公司	2514 4700	www.wokeehong.com.hk
Wolter Asia Limited	華德亞洲有限公司	2456 0198	info@wolter.com.hk
Wysermann Company Limited	威士文有限公司	2614 2213	wysermann@wysermann.com.hk
Yin On Trading Limited	賢安建材貿易有限公司	2572 7110	office@yinon.com.hk
Ying Fung (HK) Engineering Limited	盈豐(香港)工程有限公司	2690 0121	skchung@yingfung.corp.com.hk
Yordland Engineering Limited	日島工程有限公司	2362 2186	www.yordland.com
York Choi Industrial Limited	旭彩實業有限公司	2795 8286	www.yorkchoi.com
Yuen Fong Air-Condition Products (HK) Limited	圓方空調設備製品(香港)有限公司	2880 5880	yuenfongaircondition@hotmail.com
Zenith International Enterprise Limited	盛豐國際企業有限公司	2815 5852	www.ebara.com.hk

# Phenotherm® Class '0' RIGID Phenolic Foam Insulation PROFESSIONAL'S CHOICE for Ductwork & Pipework in HVAC/R System

VARIOUS colour vapour barrier surface,  
fit for VARIOUS design environment / purpose  
Aluminium Foil Facing Options :  
Aluminium bright / Black matt / White antiglare & etc...

**Pipe & Duct Support Insulation**  
- Load-Bearing Insulation  
- Fit for Various Insulation  
- Perfect the Whole Insulation System



**Effective Efficient**  
**Easy & Fast Installation**  
Apply adhesive + Snap insulation + Seal with Tape



## PAL® Complete Quality Accessories lead to a PERFECT INSULATION SYSTEM !



PAL® IA 911WB  
Class '0' Water Based  
Insulation Adhesive



PAL® IS 918WB  
Class '0' Water Based  
Industrial Sealant



PAL® IA 811WB  
Class '0' Water Based  
Insulation Adhesive



PAL® PP-11WB  
Water Based  
Protective Paint



PAL® AT-38 Series  
Class '0'  
Alum. Foil Tape



P-flex® Class '0'  
Foam Tape (Self-Adhesive)



PAL® Winflex Series  
Class '0' Insulated  
Alum. Flexible Air Duct

**P-flex®**  
Class '0'  
Flexible Elastomeric Insulation

### Features & Characteristics

- ★ Flexible
- ★ Built-in Skin as Vapour Barrier
- ★ Non-Fibrous
- ★ High Emissivity Surface
- ★ Good Resistance to Water & Vapour Permeability

P-flex® Class '0' Faced Foam Sheet/Foam Tube with PAL® DSF818 Series  
Different colour suitable for various design environment  
Aluminium bright / Black matt / White antiglare & etc...



PAL®  
DSF818



PAL®  
DSF-Black 818



PAL®  
DSF-White 818



PAL®  
DSF-Black 818



PAL®  
DSF-White 818

Extra covering  
provide stronger surface  
protection!



Class '0'  
Foam Sheet



Class '0'  
Foam Tube

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