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Ir Antonio Chan
President

Message from the President

Time flies and it has been a year since I have taken up the office. Thanks for all members' support to the council and hope members are satisfied with what the council has been offering. This will not be limited to representing the interest of members to various stakeholders, but also general activities for members to participate. The followings are worth to be reported for members' attention.

The more and more popular of eco-friendly refrigerant products are commonly introduced into the market in the past few years and ACRA has been working closely with the Government and Trade Liaison Group chaired by Electrical and Mechanical Services Department. Regular meetings were held together with Fire Services Department, Environment Protection Department, Labour Department, Architectural Services Department, the Association of Registered Fire Services Installation Contractor, Building Services Operation and Maintenance Engineer Society, Fire Insurance Association under the Hong Kong Federation of Insurers, the Federation of Electrical and Mechanical Contractors, the Hong Kong Institution of Engineers-BS Division, Hong Kong and Kowloon Electrical Appliances Merchant Association, the Hong Kong Registered Ventilation Contractors Association, the Real Estate Developers Association of Hong Kong, Vocational Training Council and the Hong Kong Association of Property Management Companies. Since then, there have been 4 classes of Next Generation Refrigerants Development held in collaboration with VTC in their Pokfulam Campus and the aim is to refresh all practitioners on the global development of eco-friendly refrigerants covering flammable, semi-flammable and non-flammable types. In April, ACRA in collaboration with the Hong Kong Air-Conditioning and Refrigerating Trades Workers General Union together with VTC held an awareness class and there were more than 300 participants attending the class and being aware of the latest eco-friendly refrigerant products. More of these types of classes are scheduled in future in order to spread the messages around for front line workers.

Greater Bay Area (GBA) is a new platform which the council is exploring how to make closer connection with the air conditioning and refrigeration industry. In January 2019, nearly 30 member companies who have their own manufacturing plants in GBA joined a group visit to Guangzhou Industry and Trade Technician College (GZITTC). GZITTC is an organization similar to VTC in Hong Kong who offers different kind of programme. The aim of this visit was mainly to establish a link between our members and GZITTC in how to support our members in GBA recruiting youngsters including apprentice. In May, we have been invited to the First Guangdong-Hong Kong-Macau Greater Bay Area Hotel Engineering Forum which was yet another large event for exchanging related experience. There were more than 300 participants with 23 different organization participated including ACRA. We are looking forward to a closer connection with organization, association and institution in the GBA.

In February 2019, Labour Department has submitted a consultation paper to raise penalties of Occupational Safety and Health Legislation and sought for stakeholders' view on the proposals and to be discussed on 19 March 2019 in the LegCo Panel in Manpower. Members can make reference to <https://www.legco.gov.hk/yr18-19/english/panels/mp/papers/mp20190319cb2-981-3-e.pdf>

Although ACRA strongly agreed the importance of site safety but we have issued in April to the Legislation Review Team of the Occupational Safety and Health Branch of Labour Department to express our objection on behalf of all members regarding the detail of the proposals escalating the amount of penalties as well as imprisonment in particular fines equal to 10% of the companies' turnover. We are looking forward for their further review taking into consideration our objection points.

Most recently, we have established the ACRA BIM Task Force with the aim to promote BIM among our industry in line with the government policy and the latest promotion by DevB and CIC in MiC (Modulated Integrated Construction) and DfMA (Design for Manufacturing and Assembly). Members are again encouraged to seek funding support from CITF administered by CIC in adaptation of BIM both in training and software/hardware procurement.

ACRA will continue his role working closely with various government bureaus and departments on the common interest of the Air Conditioning and Refrigeration industry in standards, policy advice, legislation requirement, consultation, specification, building energy code, etc. and above all sustaining the quality standard of our industry serving the community of Hong Kong. Members' attention are drawn to the latest Healthcare Engineering Requirements of Day Procedure Centres (DPCs) after the Private Healthcare Facilities Ordinance (Cap 633) passed in the LegCo and gazetted on 30 November 2018. ACRA was invited in May to the first meeting established by Health Department in exchanging views of MVAC installation and details how to regulate DPCs. We shall keep members updated with the latest development.

ACRA will continue to serve our members not only in industrial related matters but also in social events. Besides the golf tournament in December 2018, there is another golf tournament coming up in June 2019. More to come is the forthcoming dart competition and members are encouraged to join and have fun.

Last but not least, I would like to express my sincere thanks to all council members, different committees, task forces as well as our Administration Officer for their continuous contribution and effort supporting the operation of the association.

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Recent Job References:

*Photos are for reference only.



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Total Cooling Capacity:18,525 RT



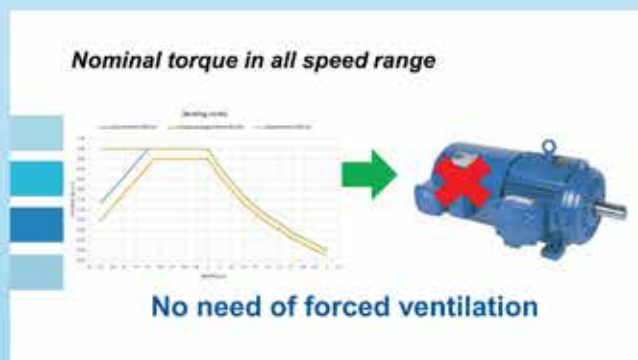
Grand Mercure Hotel (Five Star)—Jakarta, Indonesia
Total Cooling Capacity: 1,200 RT





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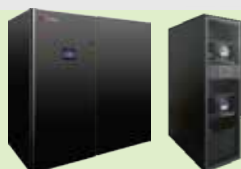
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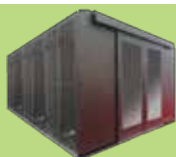
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Green Finance

What is Green Finance?

Green finance is a broad term that refers to capital raising and financial investments flowing into projects, products and companies that support the development of a more sustainable, low-carbon and climate-resilient economy.

While green finance includes climate finance, it is not limited to it and refers to a wider range of environmental and sustainability objectives, including clean energy; pollution control; green buildings, transportation and infrastructure; energy efficiency; sustainable resource management; and environmental services, such as waste management and sustainable forestry.

Whereas green finance was previously a niche activity, it is now becoming a mainstream part of the financial services world.

Green Finance Landscape

In December 2015, the 21st Conference of the Parties (COP21), also known as the 2015 Paris Climate Conference was held in France. The outcome of COP21 was the adoption of the Paris Agreement, signed by 195 countries with the aim of keeping global warming below 2°C, requiring countries to implement their national climate plans as well as increase their political ambitions to address climate change and mitigate greenhouse gas emissions over time. To achieve these goals, finance on a massive scale is required.

In February 2016, it was committed by finance ministers and central bank governors of the G20 major economies to exploring ways to raise the US\$90 trillion of investments required over the next 15 years to achieve global sustainable development and climate objectives. Along with the Paris Agreement and the Sustainable Development Goals adopted by the United Nations in September 2015, a strong signal has been sent that both public and private finance needs to be directed towards and consistent with a pathway of low-emission and climate-resilient development. This will lead to a shift in perception of risk, particularly on high-carbon investments. Governments round the world are increasingly taking steps to encourage the development of green finance, including China, the UK, Japan, Singapore, Malaysia and Indonesia.










China is playing a leadership role in green finance and shaping the policy and market landscape. In March 2015, the People's Bank of China (PBOC) estimated that China will need to invest over US\$1.5 trillion in green projects during the 13th Five-Year plan period, only around 15% of which is likely to be provided by government. The PBOC also published a summary report of the Green Finance Task Force, 'Establishing China's green financial system. The report lays out the rationale why China should develop a green financial system and proposes fourteen areas for action. In many of these areas, action is already being taken and the 13th Five-Year Plan includes a number of references to green finance priorities. The report sets out fourteen recommendations, grouped under four categories.

Hong Kong's Current Position on Green Finance

Hong Kong had already commenced its own initiatives in a number of these areas, shown in Figure 1 below, and the Green Finance Task Force report identified several areas, also shown below, which present opportunities for Hong Kong.



Figure 1: Summary of China's Green Finance Task Force report recommendations

Institutional development	Fiscal/financial policy support	Financial infrastructure	Legal infrastructure
Building green banking system	Develop green financial products	Support green investments	Define new liabilities
1. Set-up a national Ecological Development Bank and local green banks	4. Green lending 	7. Expedite emissions trading market development 	12. Mandate environmental pollution liability insurance
2. Fund green industrial development 	5. Green bonds 	8. Set-up green rating system 	13. Lay down environmental liability for banks
3. Adopt environmental risk management system for China's external investments 	6. Green IPOs 	9. Create green stock index 	14. Require environmental information disclosure system for listed companies and bond issuers
		10. Promote corporate environmental cost accounting system	
		11. Establish green investor network 	

■ Hong Kong already taking action
 ■ Top priority opportunity for Hong Kong
 ■ Action being taken and further opportunity for Hong Kong

Green Finance presents a significant opportunity for Hong Kong to build its bond and project finance markets, providing numerous benefits from increased employment to growth in the investment management, derivative, insurance and private equity industries. It also provides business to other important sectors such as law, accountancy and green buildings.

Green Finance Drives for Green Buildings, Construction and Products



Green building is a practice of reducing the environmental impact of buildings and enhancing the health and wellbeing of building occupants by:

- Planning throughout the life-cycle of a building or a community, from master planning and siting to design, construction, operation, maintenance, renovation, and demolition with a focus on the impact to both the environment and people.
- Optimizing efficient use of energy, water, and other resources to avoid overconsumption and adopting the use of renewable energy and eco-friendly materials to minimize carbon footprint and emission.
- Reducing the production of waste and preventing pollution of areas like water, air, noise and land.
- Enhancing indoor environmental quality through natural ventilation and lighting as well as good indoor air quality by design and other means.

Green buildings use less energy and reduce water and material usages than conventional buildings which in turn limit greenhouse gas emissions. Building developers and owners can demonstrate their green commitments by applying the BEAM Plus rating scheme in Hong Kong, LEED in USA or other certification schemes all over the world. BEAM Plus is tailor-made for the high-rise, high density built environment of sub-tropical climate in Hong Kong and is recognized and certified by the Hong Kong Green Building Council (HKGBC). The assessments will be carried out by BEAM Society Ltd. (BSL). It offers a comprehensive set of performance criteria for a wide range of sustainability issues relating to the planning, design, construction, commissioning, management, operation and maintenance of a building, and is aligned with local regulations, standards and codes of practice. By providing a fair and objective assessment of a building's overall performance throughout its life cycle, BEAM Plus enables organizations and companies of all sizes to demonstrate their commitment to sustainable development.

To have Green buildings, we need green construction methods, green products, innovations and new technologies. The Financial Secretary proposed to set up a HK\$1 billion Construction Innovation and Technology Fund (CITF) to boost the capacities of enterprises and practitioners in the construction industry. The Development Bureau of the Hong Kong Special Administrative Region Government (DEVB) commissioned the Construction Industry Council (CIC) to be the implementation partner.

The CITF is established to encourage wider adoption of innovative constructive methods and new technologies in the construction industry with a view to promoting productivity, uplifting built quality, improving site safety and enhancing environmental performance. The CITF is dedicated to:

- support technologies (including machinery, equipment and software) with proven effectiveness in boosting productivity, uplifting built quality, improving site safety or enhancing environmental performance, through leveraging automation, industrialization and digitization rather than sheer innovative management practices (in short, technology adoption), and
- enhance the capability of practitioners to harness technology for the continuous improvement of our construction industry, the CITF will support existing practitioners and prospective built professionals to take part in courses and events on advanced construction technologies (in short, manpower development).

Through the schemes unification of the Carbon Labelling Scheme (CLS), administered by CIC, and HK G-PASS, managed by HKGBC. The CIC Green Product Certification, the new brand of the unified scheme, will be the leading building and construction products / materials certification scheme serving the Hong Kong construction industry. The scheme is owned by CIC and operated by HKGBC. The overarching objective is to have a comprehensive scheme taking into consideration of a wide spectrum of aspects such as carbon footprint, greenhouse gases emission, energy / water efficiency, recyclability, and minimal use of irritating, harmful and toxic materials throughout the products' life cycle. This scheme will better enable building and construction practitioners in making informed decision on selection and procurement of products and materials with minimal environmental impact. The ultimate aim is to transform Hong Kong into a greener built environment. The buildings under Green Finance arrangement will definitely prefer to use more green products with CIC Green Product Certification and renewable energy.



Reference

1. FSDC Paper No. 23, Hong Kong as a Regional Green Finance Hub, May 2016
2. Construction Industry Council's website, www.cic.org.hk
3. Hong Kong Green Building Council's website, www.hkgbc.org.hk
4. BEAM Society Ltd.'s website, www.beamsociety.org.hk



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The engineer's choice

People Interview

with Mr. Colin Chan

本會有幸邀請業內知名的陳國輝先生（Colin Chan）又名「鑊叔」接受訪問，陳先生曾設計多個極具規模的海水製冷系統項目。陳先生多年的努力成果備受肯定，系統一直沿用至今，現已成為業界的操作參考標準，為行業的日後發展建立良好基礎。陳先生在訪談過程中毫不吝嗇地分享其難忘的工作點滴及職場百味，娓娓道出可貴經驗，本會獲益良多。



陳國輝先生

矢志向學 追尋理想

當年陳先生在十一歲時隻身由國內移居香港，身上只有十元的他於是投靠同鄉，在藥材店任雜工。其後機緣巧合之下，陳先生有機會於夜校修讀英語，繼而轉至工專接觸機械工程，汲取實用知識。陳先生憶述當時老師甫進班房便即下斷語，在座四十二位同學中，最多只會有兩位達標可以晉升到高級課程。陳先生即立下決心，矢志不斷求進，最後躋身修讀高級課程之列。憑著堅毅不懈的精神，陳先生完成了九年的半工讀生涯，當中包括了三年的高級課程及兩年的進階課程。其後，更多得藥材店老闆娘的知遇之恩，陳先生得以出國到澳洲，攻讀有關機械工程的專業課程。人在外地，陳先生向九大工學院逐家扣門，最後成功考入位於維多利亞省一家工學院，展開為期四年的留學課程。陳先生畢業後巧遇賞識他的伯樂，並聘用他為一家設計及建造物料處理機械公司出任署理總工程師，留澳工作三年後，陳先生就告別澳洲，決定回港發展。

踏足本港職場 嶄露頭角

陳先生於一九七一年回港後，一直繼續鑽研空調知識，積極裝備自己。其後禮信（JRP）邀請陳先生加入，所經手主理的項目多不勝數，得以將知識學以致用之餘，更獲取到難得的實戰經驗。優秀的工作表現贏得管理層的信心，陳先生於是被總工程師點名委託負責一個旗艦級項目，為尖沙咀海港城設計及執行海水製冷系統，締造觸目全港的地標。陳先生包辦了十六個合約中的其中四個主要核心部份，所有合約需同時進行，工期分秒必爭，而陳先生亦壯志滿懷、全情投入，將海水系統的設計圖及所需文件於短短六個星期完成，迅速的辦事效率加上高準繩度施工，奠定了陳先生不可或缺的地位。

克服挑戰 突破困局

其實「鑊叔」一名的由來，是由於當工程每有事故時，都會求助於陳先生以解決問題，屢次將困難迎刃而解。猶記得當年在海港城進行系統調試時，海水系統壓力異常，陳先生當時廢寢忘食，獨自留守在機房數日以找出原因。當在體力透支之際，忽然靈機一觸，發現水喉內的流水聲異常，從而找到問題根源，於是立即對症下藥，將



喉管穿開加設一個氣閥，使系統可以正常運行。另外，當年中環置地中央海水系統的地底發現有海水喉管斷裂破損，若不從速處理，事態之嚴重可以引致中環數座辦公室樓宇的冷氣系統沒法正常運作。當時「鑊叔」又再一次被委以重任處理棘手難題，由方案設計到現場執行都親力親為、一手包辦。最直截了當解決喉管破損問題當然是進行更換，但考慮到成本高昂又耗時，所以無論對客戶利益及實際情況而言，直接更換喉管決不是一個最理想的解決方案。經過一番深入研究，「鑊叔」於是構思到在喉管加設內搪層（internal lining）的方法，使有效大大減低工程成本及工時。「鑊叔」面對問題從不言放棄，以照顧客戶需要為己任，「鑊叔」這個褒稱其實就是客戶同業對他的認同。

忠於職守 滿腔熱忱

經陳先生主理的大型海水製冷項目多不勝數，包括香港滙豐總行大廈、香港科技大學、香港置地各大廈及沿維港受中環及灣仔填海所影響的大廈系統等，每個工程項目都各有獨特之處，所需面對的挑戰亦絕不盡然一樣，但不變的是，陳先生的專業精神都始終如一，本著盡職盡責的工作態度為客戶完成項目。無論是週末或節慶假期，只要是工作需要，陳先生都毫不猶豫的無怨加班，以確保工程順利進行。陳先生鍥而不捨解決問題的態度、主動積極的服務精神，為年輕同業樹立下良好榜樣。

多一份努力 就多一份幸運

陳先生職場順遂，所靠賴的並不是幸運，而是勤奮努力的做人態度。陳先生寄語，要達到成功道路是沒捷徑可抄的，惟一直付出努力，走過崎嶇不平的道路，摒除障礙，直至走出一條康莊大道。努力與幸運成正比，越努力

就帶來越優秀的成就。成功不是源於僥倖的運氣，而是源於自己腳踏實地的累積。

本會衷心感謝陳先生撥冗與我們分享事業生涯箇中經歷，在此謹祝願陳先生退休生活愉快，享受愜意盎然人生。



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System :

G.I. Duct protected by 6mm thick Durasteel with/without mineral wool

Fire Test Standard:

BS476: part 24: 1987 for internal and external fire exposure

Fire Rating :

	Duct A	Duct B	
Stability :	240 minutes	240 minutes	
Integrity :	240 minutes	240 minutes	
Insulation :	240 minutes	30 minutes	(without mineral wool)
		240 minutes	(with 100mm thick x 140kg/m ³ mineral wool)

Impact Test Standard:

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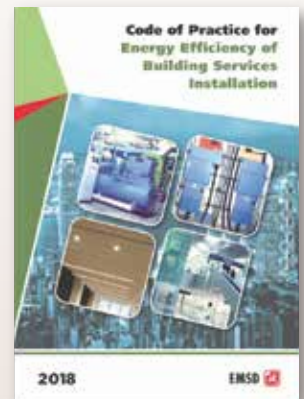
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The Building Energy Code 2018 Edition

Energy Efficiency Requirements for Air Conditioning Installation

By: Franco K.P. Mok, R.P.E. REA, CEM, CBCP, BEAM Pro, CEng, MBSOMES, MIMechE, MHKIE, MAEE

The Building Energy Code (BEC) is set to be reviewed every three years since the first edition published in 2012. The second review conducted in 2018 incorporating the latest technological developments and new requirements which caters for retro-commissioning. The BEC 2018 Edition will take effect on 16 May 2019 and 16 August 2019 for Stage One Declaration (new building projects) and Form of Compliance (major retrofitting works) respectively. The focus of the new ordinance is continuous on improving energy efficiency of hardware and equipment; some new requirements on system monitoring and control operation are imposed for enhancing the overall system efficiency and availability of energy trend logging data in support of retro-commissioning and energy audit.



Controls

A number of new requirements on controls are incorporated into this new edition, which includes the open-circuit cooling tower fan speed control and off-hours control.

There is a new requirement on open-circuit cooling tower fan with individual motor or array of motors with rated power totaling 3.7kW or above. It is required having the fans to incorporate with suitable control in result of less than 30% of design input power when operating at half of design air flow rate. It will automatically control the fan speed in order to control the leaving condenser water temperature of the cooling tower.

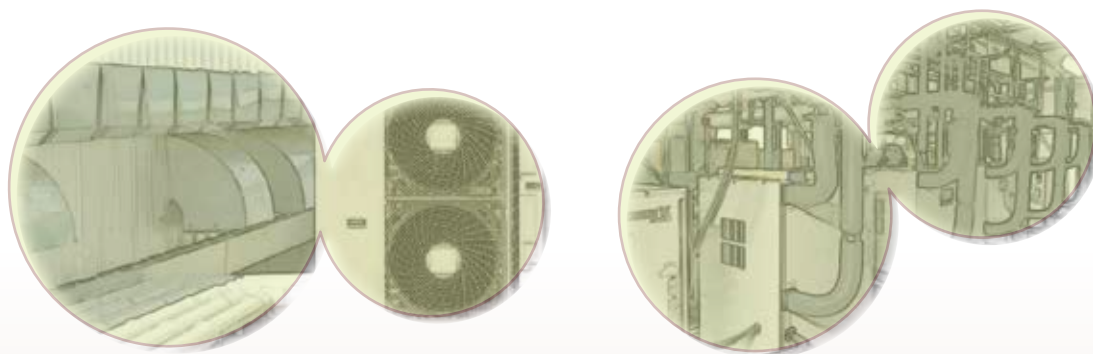


For the off-hours control, this edition defines the requirement on control setback and equipment shutdown.

If deploying control setback, the air-conditioning system has to be at least 5°C above and 6°C below the occupied set-point for cooling and heating mode operation respectively.

If deploying equipment shutdowns for off-hour operation, the air-conditioning system should be equipped with at least one of the following methods:

- i) Start/stop control of the system shall be under different time schedules for 7x24 operation and be capable of retaining programming and time setting if power loss for ten hours. It shall also include accessible manual override control that allows temporary operation of the system for up to two hours.



- ii) Occupant sensor shall shut off the system when no occupant is sensed for a period of up to 30 minutes.

Energy Metering

In this version, enhanced requirements are imposed on measurement of harmonic order and history trend logging interval on measurement parameters.

For a main circuit, if feeder or sub-main circuit is at or above 400A current rating, the metering devices should be capable of measuring at least up to 31st harmonic order.

All the measurement parameters of energy meters for MVAC equipment system (i.e. chiller, heat pump, unitary air-conditioner or chilled/heated water plant of 350kW or above cooling/heating capacity) and electrical circuits (main circuit, feeder or sub-main circuit) are required to be trending in every 15 minutes interval, including hourly, daily, monthly and annual data. The metering devices and the associated monitoring facilities should be capable of maintaining all data collected for a minimum of 36 months, which is useful for future energy audit and analysis during retro-commissioning process.

Efficiency Requirement on Air-conditioning Equipment

This updated version continues to tighten up the efficiency requirements of MVAC equipment. The min. COP of VRF system (cooling and heating mode) and various types of chillers have been further uplifted to cope with the technological advancements.

The VRF system and heat pump are also included as major retrofit work while the new requirements of min. COP of heat pump have also been newly incorporated in this version.



Motor Efficiency in MVAC systems

In this edition, for motors with the rated output below 7.5kW, the minimum rated efficiency of motors are required to be up to the IE3 standard (80.7% to 89.6%). Hence, the updated code of practice requires all ranges of motor with the minimum of IE3 efficiency standard.

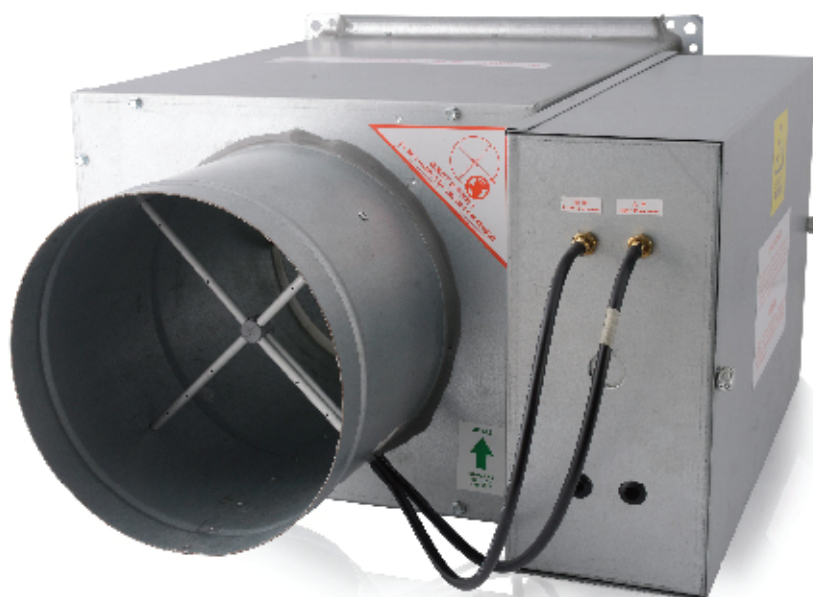
It is anticipated that the tightened requirements in BEC 2018 will further reduce 6% to 8% energy consumption in HVAC of typical commercial buildings. Recently, EMSD published the 2018 Edition of Technical Guideline on Retro-commissioning to encourage the operation teams to reduce energy use via adjusting the settings of set-point and control optimization with actual functional requirement. Aligning with the Guideline, the updated version of BEC code is incorporated with the requirements on energy efficiency control and energy monitoring data trend. Applying these practices to operating buildings allows the related parties to study on the data collected. This will be useful for future energy audit and retro commissioning work.



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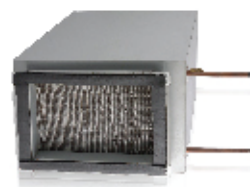
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#闊度500mm

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變頻 冷暖窗分系列

1匹 1.5匹 2匹

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1級
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Recapitulation on Safety of Flammable Refrigerants from EMSD, FSD and LD

Recently EMSD re-circulated a joint letter issued by the Government (EMSD, FSD and LD) on Safety of Flammable Refrigerants dated 4 July 2017 for industry's attention.



Ref No.: EMSD/GSD-B/160, FSD/FP(LC) 333/13, LD OD/1-35/3

4 July 2017

To: Air-Conditioning and Refrigeration Trade Members, Property Management Companies, Owners and Users of the Refrigeration Equipment and Other Stakeholders

Circular: Safety of Flammable Refrigerants

Hydrofluorocarbon (HFC) refrigerants are now commonly used in Hong Kong. They are neither flammable¹ nor ozone depleting and are compliant with the relevant existing safety and environmental statutory requirements. However, HFC has high global warming potential (GWP) and its emission into the atmosphere would have a negative impact on global warming. In view of this, an agreement on the timeframe for reducing carbon emissions and phasing out high GWP gases (including the existing HFC refrigerants) was reached in October 2016 by nearly 200 representatives from different countries. Given the above development, low GWP but more flammable refrigerants have been used in some refrigeration equipment (including air-conditioning and refrigeration systems) in some parts of the world in recent years.

In Hong Kong, equipment using HFC as refrigerants is still available on the market and the trend of using flammable refrigerants in air-conditioning and refrigeration equipment in industrial and commercial buildings is not obvious at present. Nevertheless, the Electrical and Mechanical Services Department (EMSD) and the Fire Services Department (FSD) remind the local air-conditioning and refrigeration trade members, property management companies, owners and users of the refrigeration equipment and other stakeholders to duly consider the regulation and safety regarding flammable refrigerants, and to take public safety as the primary consideration when choosing refrigeration equipment and its refrigerants. In view of Hong Kong's crowded and densely populated environment with congested high-rise buildings, it is not suitable to adopt refrigeration equipment using flammable refrigerants (please see [Annex](#) for examples) in industrial and commercial buildings from the perspectives of safety and risk management. As for existing equipment, you are advised to adopt the prescribed refrigerants according to the manuals provided by manufacturers instead of switching to flammable refrigerants for the avoidance of accidents. Besides, the Labour Department (LD) reminds the

employers concerned to develop and maintain a safe system of work, providing adequate safety precautions if their employees are required to handle refrigerants, irrespective of whether they are flammable.

The storage, handling and use of refrigerants are subject to statutory regulation, including the Dangerous Goods Ordinance and the Gas Safety Ordinance enforced by FSD and EMSD respectively, as well as the Factories and Industrial Undertakings Ordinance and the Occupational Safety and Health Ordinance which are enforced by LD in relation to occupational health and safety of employees.

Air-conditioning and refrigeration trade members and property management companies are also advised to convey the above message to owners and users of refrigeration equipment. In case illegal storage, handling and use of flammable refrigerants are found, or where there is any violation of occupational health and safety requirements in the work process concerned, law enforcement actions will be taken by the relevant departments.

In addition, EMSD will, together with the relevant departments, keep a close watch on the research and development of refrigerants and the development of refrigeration equipment, and continue the effort in offering advice to trade members and stakeholders.

For enquiries on this circular, please contact EMSD at 2808 3683.


 (POON Kwok-ying, Raymond)
 for Director of Electrical and Mechanical Services


 (CHAN Kam-cheung)
 for Director of Fire Services


 (CHAN Cheung-hing, Thomas)
 for Commissioner for Labour

¹ HFC is classified as Class 1 according to the flammability classification of the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE), i.e. it does not show flame propagation at 60 °C.

Annex

Name of Refrigerant	Composition	Flammability Classification of ASHRAE *
R600a	Isobutane (異丁烷)	Class 3 (Highly Flammable)
R290	Propane (丙烷)	Class 3 (Highly Flammable)
R32	Difluoromethane (二氟甲烷)	Class 2L (Mildly Flammable)
R1234ze(E)	1,3,3,3-Tetrafluoropropene (1,3,3,3-四氟丙烯)	Class 2L (Mildly Flammable)
R1234yf	2,3,3,3-Tetrafluoropropene (2,3,3,3-四氟丙烯)	Class 2L (Mildly Flammable)

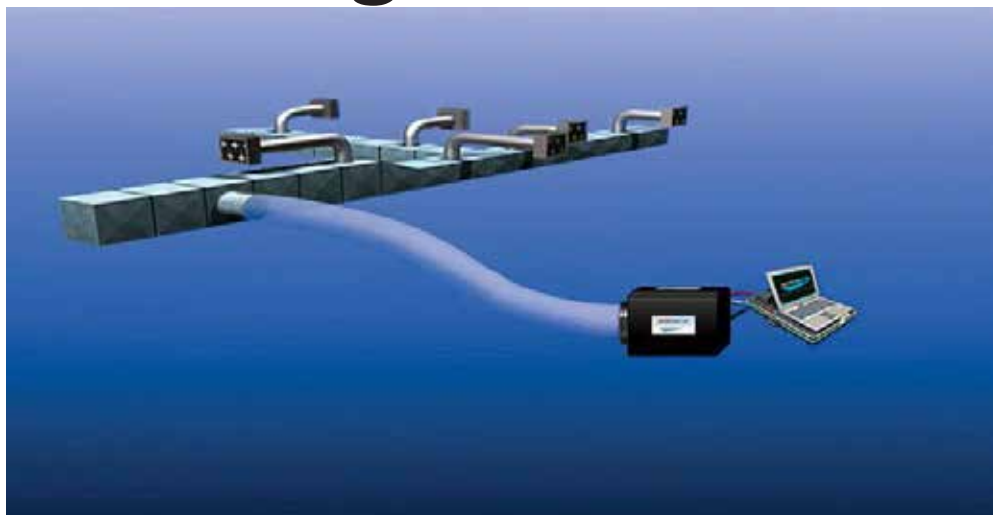
* American Society of Heating, Refrigerating and Air-conditioning Engineers

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The Better Way to Connect Chilled-Water Piping – Gruvlok / Grooved Couplings and Fittings!

Did you know that, there is an installation used worldwide to actively protect human beings and properties? The piping used in sprinkler installations is basically connected with couplings and grooved fittings. In this case, the quality of the grooved products must be good in order to fulfill the capability for protecting lives of all individuals.



It has already been recognized that these grooved products are widely used globally nowadays for heating and air-conditioning systems including chilled- and cool-water installations. The reason why consultants select grooved products is due to their reliability, ease of installation and the technical advantages offered.

Principally, once connecting the grooved piping, multiple benefits are brought to the installation. Ease and speed of installation – since the couplings are located in the Groove, the flexible or rigid connection can be done in just a glance. All those hot-work permits, sparks or welding torches are No Longer Needed. Each coupling is a union which can be used to adjust or change the installation. As well, flexible couplings offer angular deflection which is handy when adjusting for misalignment is necessary. On the other hand, flexible couplings offer you space for expansion and contraction, so to compensate for thermal growth of pipe, or movement in the piping.

Couplings does not require a lot of space for installation as they are easily accessible, with the sizes range from 1"-DN25 to 60"-DN1500.

Advantages of Grooved Couplings:

1. Swift Installation on site. Save up to 30% in time versus the welded systems.
2. Easy Installation. Only a (power) wrench is needed to connect pipe and fittings on site
3. Noise Reduction. The gaskets in the couplings diminish the noise that is usually heard in installation



4. Vibration Reduction. The same gaskets are in full contact with the pipe and absorb a great part of the vibrations in the systems due to cooling installations or pump.
5. Versatile. Directions or fittings can be altered by loosening nuts and bolts of the coupling.
6. Easy Maintenance. Open two couplings and the piping system can be accessed for checks or cleaning or adaptations.
7. Compensate for Expansion. Flexible couplings can absorb thermal expansion because of the room between the pipes in a system.
8. Compensate Angularity. Flexible couplings offer angular deflection to help pipes that are not installed in-line, or to compensate for rough going on terrain. It may also help to create a radius in tunnels or stadiums.,
9. Simple. No special skilled personnel is required to install the couplings.

In short, couplings can save time, prevent delays, support correcting errors, absorb movement, sound and vibration, that can be easily installed in limited space providing a more user-friendly installation technique which leads to the most important factor – cost-effective!



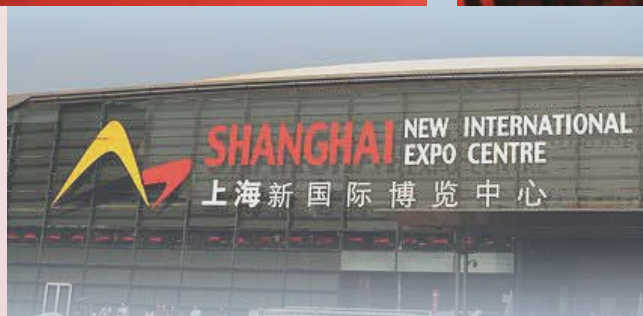
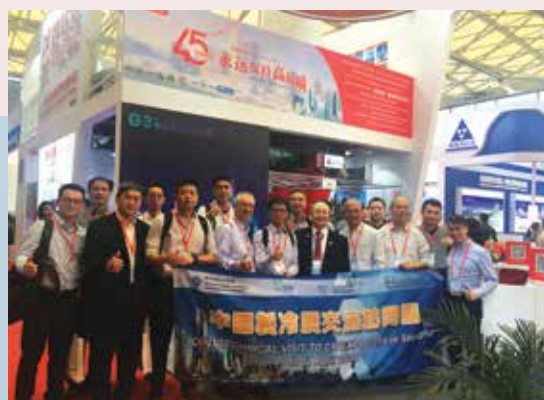
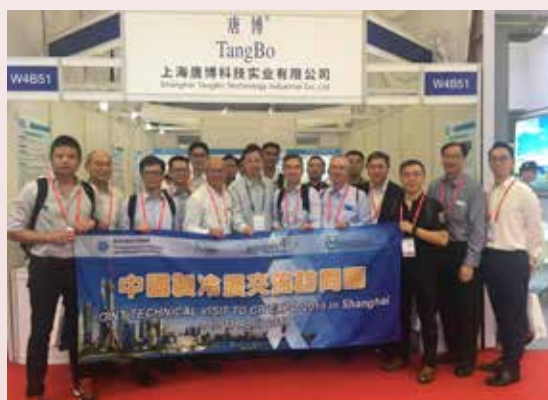
中國制冷展 2019

每年農曆新年過後，大家都不期然地期待著收到參加中國制冷展的通知。這個一年一度的空調和制冷界的盛事，不但提供了一個良好的溝通和聯誼平台，並已經成為業界各持份者接觸和了解新產品和應用技術的好機會，所以大家都非常期待。

今年適逢是中國制冷展三十週年，香港方面組織了兩個代表團前去參觀。其中一個是由香港註冊通風系統承建商協會（HKRVCA）牽頭，另外一個代表團則由香港空調及冷凍商會（HKACRA）、香港能源工程師學會（HKAEE）、ASHRAE香港分會和英國屋宇裝備工程師學會 - 香港分部（CIBSE HKB）合辦。兩個代表團總共有超過50多人出席了這個盛會。本屆參展單位超過1,200家，吸引了超過六萬名來自全球的專業觀眾和用戶前來參觀。

4月8日中午，兩個代表團浩浩蕩蕩地從香港國際機場出發，乘坐國泰港龍航班往上海浦東國際機場。當晚出席了由大會安排的國際組織招待酒會和開幕招待晚宴。

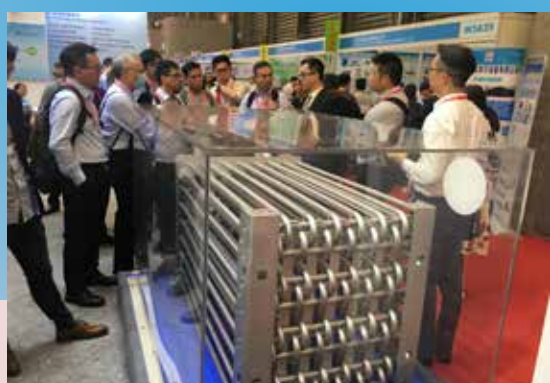
4月9日早上，五會代表出席了大會開幕典禮和主題論壇。在進場參觀之前，以冷凍商會為首的代表團齊集於上海新國際博覽中心入口前拍了一張大合照留念。今年香港參展商為數不少，在會長陳紫鳴帶領下，代表團都遂一去拜訪。



第三天早上，代表團參觀了位於江陽的 Alfa Laval Heat Exchange 工廠。下午回到了黃埔區考察盈電（中國）有限公司 / 利盈電機電工程（上海）有限公司的辦公室。該辦公室獲得美國綠色建築委員會（LEED）和香港綠色建築（BEAM PLUS）的鉑金級認證，集綠色、智能和環保於一身。晚上由會長安排晚宴款待代表團，大家在美酒佳餚下都熱情高漲，盡興而歸。

第四天上機前，代表團去了參觀江森自控（JCI）位於長寧區的亞太區總部。大樓佔地面積4.2萬平方米（地上），應用了最先進的智慧建築產品和技術，包括安防、消防、自控和暖通空調等整體解決方案，把一座高效節能的辦公大樓展現於大家眼前，以領先科技詮釋了未來智慧樓宇，城市和社區。

代表團於傍晚安全返抵香港，全部行程完滿結束。在此非常感謝各合辦機構，協助單位和參加者！明年中國制冷展走出北京和上海，去到另外一個大城市舉行，大家猜猜是那一個中國城市？



Caring Event 關懷社區活動 2018

Happy Rice Delivery 粒粒開心贈長者



On 3 November 2018, the Happy Rice Delivery once again jointly organized with Open Door Ministries has concluded successfully. Our Caring Committee Chairman, Mr. Raymond Synn led more than 100 volunteers to deliver a total of 100 bags of rice to the elderlies in need at Lam Tin Estate. We would like to take this opportunity to thank all participated members for supporting this thoughtful event.:



Great applause to the following members:

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ATAL Building Services Engineering Ltd.

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Southa Company Limited

Welcome Air-Tech Ltd.

White Hippo Limited

Wo Lee Steel Co., Ltd

Zenith International Enterprise Ltd.

Joyful Lunch 2018 長者萬歲午宴



Caring for the community has never ceased, the annual Joyful Lunch jointly organized by ACRA and Open Door Ministries (開心社區服務) for over 200 low-income elderlies to celebrate the Winter Solstice



Festival has been held at Lam Tin on 15 December 2018. We would like to take this opportunity to thank our considerate members, sponsors and volunteers for supporting this meaningful event.



ACRA Golf Day – Kembla/Victaulic CUP 2018



The major sport event of the association – ACRA Golf Day – Kembla/Victaulic CUP 2018 has been hosted at Yinli Foreign Investors Golf Club on 14 December 2018. This occasion attracted 40 experienced golfers from our respected members to join and compete for the exciting tournament.

ACRA 57th Anniversary Dinner

The 57th ACRA Anniversary Dinner was held on 19 November 2018 gathering all members and industry professionals together to celebrate this significant event of the air conditioning industry. It was the highlight to have Ms. Sylvia LAM YU Ka-Wai, JP, Director of Architectural Services to be our Guest of Honour for the night to express her view and support towards our trade. ACRA will continue to implement its dedication to lead the air conditioning industry to a more prosperous future.



Mr. Antonio Chan – President of ACRA



Mr. Pachu Leung, Chairman of ACRA



Ms. Sylvia LAM YU Ka-Wai,
JP, Director of ArchSD –
Guest of Honour

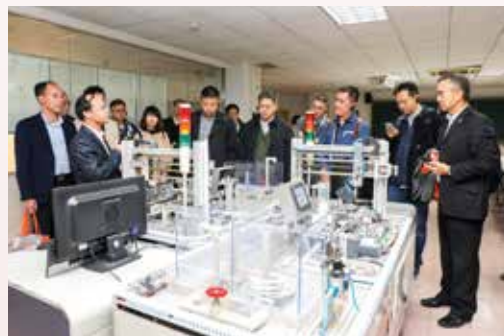
ACRA Year End Party 2018



Ranking as the most entertaining activity of ACRA, the Year End Party was held on 28 December 2018 offering incessant flow of drinks, special games, karaoke, and other delicacies for all types of members to revel for ACRA's attainments in the air conditioning industry of the year. All of the participants had a pleasant moment together with casual networking.

Visit to Guangzhou Industry and Trade Technician College

Hosted by ACRA, the delegation visit to the Guangzhou Industry and Trade Technician College (GZITTC) was conducted on 24 January 2019 provided that EMSD and GZITTC have signed a Memorandum of Understanding (MoU) for promoting the air-conditioning, mechanical and electrical services, lift and escalator, new energy application and vehicle services and operation and maintenance. It was definitely a worthwhile exchange experience, and ACRA will continue to link with the GZITTC to promote the air conditioning and refrigeration industry for the regions of Hong Kong and Greater Bay Area.



3rd Class for Next Generation Refrigerants Development

The third class of the Next Generation Refrigerants Development jointly organized by ACRA, EMSD, and VTC Pro-Act was held on 15 February 2019 to offer the information on different options of next generation refrigerants with reference to the safety consideration and environmental influence particularly on reduction on HFC and GWP.



ACRA Spring Dinner 2019

With the festive of Chinese New Year of Pig, the Spring Dinner of ACRA was hosted at Hung Hom on 1 March 2019. This delightful feast received overwhelming response that approx. 450 members and industry insiders have participated to enjoy in the relaxing atmosphere pampering with scrumptious F&B, amusing games and lucky draw. It was definitely a fascinating night for all participants.



E&M Expo 2019 – E&M New Momentum

On 8 March 2019, ACRA has participated in the E&M Expo 2019 – E&M New Momentum organized by EMSD with support from E&M organizations. During the event, ACRA has exerted great effort in attracting new blood to join the air conditioning industry by promoting to

2,000 students, parents and teachers with practical experience and knowledge sharing by our council members.



Revision Course on Handling HFC & Blend Type Refrigerants for ArchSD Contracts



ACRA provides extensive support for the continuous advancement of the air conditioning industry. On 8 March 2019, a revision course was organized for the registered workers in handling HFC & Blend Type Refrigerants for ArchSD contracts. The update of the current development of refrigerants and review of training materials was discussed.

Seminar on Safe Handling of Inflammable Refrigerants

ACRA, ARU and VTC Pro Act have jointly organized the Seminar on Safe Handling of Inflammable Refrigerants on 11 April 2019. EMSD, FSD, LD and industry practitioners were invited to share their specialized experience and facts on the selection, handling and utilizing of inflammable refrigerants with concerns on the safety and environmental aspects through this session.



ACRA Horse Racing Night 2019

The Horse Racing Night is an event that all members are craved for given the thrilling Horse Racing Competition with attractive prizes offered. This year, the event was held at Happy Valley Racecourse on 24 April 2019. It was another rewarding event for all participants, and congratulations to the lucky winners for the competition.



空調管道隔熱材料安裝技術及知識之証書課程

根據政府規定，承辦政府工程之隔熱保溫安裝，承辦商必須提供不少於一成（10%）安裝技術人員持有本會或同等認可機構發出合資格證書的技術人員指導施工。有見及此，本會於2019年4月26日舉辦為期一天隔熱保溫安裝技術講座，當中內容包括1) 發泡橡塑保溫（豬腸膠）及 玻璃棉課程 和2) 泡沫酚醛 及PID 直接風管系統課程。



New Members

Nov 18 to Apr 2019

1	Samsung Electronics H.K. Company	Nov-18
2	Shun Hing Electronic Trading Co., Ltd.	Nov-18
3	Sun First International Ltd.	Nov-18
4	Victaulic Hong Kong Ltd.	Nov-18
5	Sunny Fire Engineering Ltd.	Dec-18
6	Join Rich Engineering Limited	Mar-19

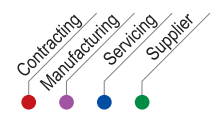


凱士比有限公司
KSB Limited
 Unit 1801-02, 18/F, The Phoenix, No.21-25 Luard Road, Wan Chai, Hong Kong
 Main Line: (852) 2147 1220 Office Fax: (852) 2147 1230 Email: ksb.hongkong@ksb.com
 Website: www.ksb.com

MEMBER LIST



	Company Name		Contact Number	Website / Email	Trade
ACRA Fellow Members	ATAL Engineering Limited	安樂工程有限公司	2565 3399	www.atal.com.hk	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
	Carrier Hong Kong Limited	開利 (香港) 有限公司	2694 5375	www.carrier.com.hk	
	Krueger Engineering (Asia) Limited	高雅機電工程有限公司	2860 7333	www.krueger.com.hk	
	Newland Engineering Limited	新陸工程有限公司	2967 8620	moshiu@newland.com.hk	
	REC Engineering Company Limited	盈電工程有限公司	2619 8888	www.rec-eng.com	
	Shinryo (Hong Kong) Limited	新菱工程香港有限公司	2237 8624	www.shinryo.com	
	Shun Hing Engineering Contracting Company Limited	信興機電工程有限公司	2419 8282	www.shecon.com	
	The Jardine Engineering Corporation Limited	怡和機器有限公司	2807 4511	www.jec.com	
	Trane Hong Kong	特靈香港	3128 4756	www.tranehk.com	
	Winston Air Conditioning & Engineering (Hong Kong) Company Limited	永通冷氣工程 (香港) 有限公司	2764 1200	www.winston-hk.com	
	York International (Northern Asia) Limited	約克國際 (北亞) 有限公司	2590 0012	www.johnsoncontrols.com	
	Young's Engineering Company Limited	景福工程有限公司	2235 0900	www.youngs.com.hk	
ACRA Ordinary Members	Alliance Contracting Company Limited	聯和承造有限公司	2891 9083	www.alcc.com.hk	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><d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Company Name	Contact Number	Website / Email	Trade
Great Top Engineering Limited	宏鋒工程有限公司	2345 2219	general@greattop.com.hk
GRUNDFOS Pumps (Hong Kong) Ltd.	高福水泵(香港)有限公司	3540 0300	www.grundfos.com
Hang Ji Industries International Co., Ltd.	恒基工貿國際有限公司	2721 6129	www.hangji.com
Hensen System Engineering Limited	豪信系統工程有限公司	2884 9001	cecil@hensen.com.hk
Hilti (HK) Limited	喜利得(香港)有限公司	2773 4705	www.hilti.com.hk
Hi Tak Thermal & Acoustic Insulation Eng. Limited	喜德保溫隔聲工程有限公司	2770 7703	www.hitakinsul.com
Hofmann Construction Material Ltd.	香港好夫曼建材有限公司	3157 1841	www.hofmannhk.com
Honest Air Conditioning Limited	明發冷氣有限公司	2396 8108	www.achonest.com
H.W. International Air-Conditioning Limited	豪華國際空調有限公司	2796 8888	info@hooair.com
IES Engineering (Hong Kong) Limited	恒豐工程(香港)有限公司	2992 0830	www.ieshk.com.hk
InnoTec Engineering Ltd.	科技工程有限公司	3706 6333	info@innoteceng.com
Intelligent Technologies Limited	毅智科技發展有限公司	2301 4868	info@intelligent-net.com
Jade Star Engineering Limited	捷陸工程有限公司	3998 3256	jadestarkh@yahoo.com.hk
JC (HK) Engineering Limited	悅峰工程有限公司	2898 9885	jc.hk.eng@gmail.com
J & J Network Engineering Company Limited	信卓網絡工程有限公司	3579 5263	www.jjnetwork.com.hk
Join Rich Engineering Limited	億聯工程有限公司	3153 2048	www.joinrich.com.hk
Jinchat Engineering (HK) Company Limited	正卓工程(香港)有限公司	2687 1755	jjin@jinchat.com
Jun Feng Company Limited	駿峯有限公司	2707 3088	www.junfeng.com.hk
Keio Engineering Company Limited	京王工程有限公司	2695 8872	www.keio.com.hk
Kembla (Hong Kong) Limited	金特霸(香港)有限公司	2528 0999	www.kembla.com.hk
Kin Wo A/C Engineering Limited	健和冷氣工程有限公司	2398 0157	kw@kinwo.com.hk
Kinetics Noise Control (Asia) Limited	建力聲震控制(亞洲)有限公司	2191 2488	www.kineticsnoise.com
Kings View Airconditioning Engineering Co., Ltd.	景匯空調工程維修有限公司	2796 2417	admin@kingsview.com.hk
K-Flex (Hong Kong) Insulation Company Limited	凱門(香港)保溫材料有限公司	2668 5202	www.k-flex.com
KSB Limited	凱士比有限公司	2147 1226	philip.chow@ksb.com.hk
K.Y.H. Steel Company Limited	金源行鐵倉有限公司	3473 2332	www.kyh.com.hk
Laser Resources (Asia) Company Limited	全美(亞洲)有限公司	2516 7500	laasiahh@netvigator.com
LeBlanc Water Treatment & Chemicals Limited	利邦化工水處理有限公司	2408 2000	www.leblanc.com.hk
Lee Tack Engineering Company Limited	李德工程有限公司	2305 3111	ltec@leetack.com.hk
Legend Engineering Company Limited	卓越聲控工程有限公司	2815 0928	info@legendjt.com.hk
Lifa Air Limited	麗風空氣有限公司	2511 7076	www.lifa-air.com
Life Air IAQ Limited	活力空氣品質科技有限公司	3527 0106	winston@lifeairiaq.com
Link The Best Company Limited	必發(香港)有限公司	2568 4092	sales@linkthebest.com.hk
Luen Fat Air Condition (Holding) Trading & Engineering Co., Ltd.	聯發冷氣(集團)貿易工程有限公司	2345 0280	www.luenfat.com
Luen Ming Pengshan Air Conditioning Factory Ltd.	聯明坪山冷氣製品廠有限公司	2797 2168	www.luenming.com
Mason Industries (HK) Limited	梅森實業有限公司	2967 9639	www.mason-hk.com
Maxwell Electrical Asia Ltd.	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	2887 4575	www.mitsubishi-ryoden.com.hk
NAP Acoustics (Far East) Limited	NAP 聲學工程(遠東)有限公司	2866 2886	www.napacoustics.com.hk
New Way Engineering Company Limited	新法機械有限公司	2325 6892	www.newway.com.hk
Oxprime (International) Limited	鑫輝(國際)有限公司	2590 8088	info@oxprime.com
Pacific Sense Enterprises Limited	柏昇企業有限公司	3749 5272	www.pacificsense.com.hk
Paul Y. (E&M) Contractors Limited	保華機電工程有限公司	2831 8338	www.pyengineering.com
Peterson Engineering Limited	必德信工程有限公司	2365 0372	stso@peterson.com.hk
PowerTech 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	powers.pts@gmail.com
Practical Engineering (Hong Kong) Company Limited	百利高工程(香港)有限公司	2402 2772	practical@practical.hk
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	盈環環保科技有限公司	2619 8817	www.yaulee.com
Regin Controls Hong Kong Limited	瑞晶溫控香港有限公司	2407 0281	saleshk@regin.se
Ritech Engineering & Supply Company Limited	偉達工程材料有限公司	2410 1819	www.ritech-hk.com
Samsung Electronics H.K. Company Limited	三星電子香港有限公司	2862 6300	www.samsung.com.hk
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
Savills Engineering Limited	第一太平戴維斯設備工程有限公司	2534 1688	pwong@savills.com.hk
Shenling Environmental Systems (Hong Kong) Ltd.	申菱環境系統(香港)有限公司	2603 0002	www.shenling.com
Shun Hing E & M Engineering Limited	順興機電工程有限公司	2387 2882	project@shunhingeng.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 Hing Electronic Trading Co. Ltd.	信興電器貿易有限公司	2733 3888	www.shunhinggroup.com
Shun Tung Engineering Company Limited	順通冷氣機電工程有限公司	2633 6866	gabriel@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
Southa Engineering Limited	南龍工程有限公司	2963 7241	www.southa.com
Stars (Hong Kong) A/C & R Company Limited	恆星(香港)冷熱設備有限公司	6116 7832	stanley_yuen@hstars.com.cn
Sun First International Limited	昇福國際有限公司	2807 7888	www.sunfirst.com.hk
Sunny Fire Engineering Ltd.	力霸水泵機械工程有限公司	2395 6766	sunnyfireengltd@gmail.com
Superpower Pumping Engineering Company Limited	恒澤節能有限公司	2745 3562	www.sppump.com
Sustainable Energy Limited	達標能源管理有限公司	2332 3077	www.sustaine.com.hk
Target Energy Solutions Limited	達標能源管理有限公司	2358 9903	www.targetensol.com
Teembase Development Limited	天基發展有限公司	2554 6263	www.teembase.com
Tesa Tape (Hong Kong) Limited	德莎膠帶(香港)有限公司	2583 9980	www.tesa.com
Thermtech Building Products Limited	泛達建築材料有限公司	2756 3837	thermbpl@netvigator.com
Trisun Air Conditioning System Limited	三陽系統有限公司	2377 1618	enquiry@trisun.com.hk
Tinwood Pacific Limited	天匯太平洋有限公司	3956 9751	www.sinro.com
Tomi Fuji EMC Limited	富勝能源管理有限公司	2432 0170	www.tomifuji.com.hk
Tom's Equipment Company Limited	義隆設備有限公司	2757 5539	tom@toms-equipment.com
TROX Hong Kong Limited	妥思香港有限公司	2861 2261	www.troxapo.com
Tung Shing Hardware Co., Ltd.	東成五金有限公司	2626 9983	www.tungshinghardware.com.hk
Union (Luen Hop) Refrigeration Co., Ltd.	聯合冷氣工程有限公司	2627 4600	unionlh@bizentvigator.com
United Controls (Hong Kong) Limited	統一儀器(香港)有限公司	2556 1001	www.ucl668.com
Victaulic Hong Kong Ltd.	維陸工程有限公司	6898 6823	www.victaulic.com
Victory Engineering Service Company Limited	偉保工程有限公司	2979 4068	pamela@ves.hk
Viewco Building Services & Engineering Co., Ltd.	偉聯空調設備有限公司	2543 0610	engineering@viewco.hk
Wai Luen Air Conditioning Limited	華順工程有限公司	2890 9321	garychan@wailuenhk.com
Wardson Engineering Limited	白河馬企業有限公司	2329 8268	wsengltd@yahoo.com.hk
White Hippo Limited	永盛風咀製品廠有限公司	2303 1318	www.kshop310.hk
Wing Shing Air-Flow Company Limited	和利鋼鐵有限公司	2792 6331	accounting@wingshing-hvac.com
Wo Lee Steel Company	華德亞洲有限公司	2393 0131	www.wolee.com
Wolter Asia Limited	威士文有限公司	2456 0198	info@wolter.com.hk
Wysermann Company Limited	實安建材貿易有限公司	2614 2213	wysermann@wysermann.com.hk
Yin On Trading Limited	日島工程有限公司	2572 7110	office@yion.com.hk
Yordland Engineering Limited	旭彩實業有限公司	2362 2186	www.yordland.com
York Choi Industrial Limited	圓方空調設備製品(香港)有限公司	2795 8286	www.yorkchoi.com
Yuen Fong Air-Condition Products (HK) Limited	盛豐國際企業有限公司	2880 5880	yuenfongaircondition@hotmail.com
Zenith International Enterprise Ltd.		2815 5852	www.ebara.com.hk

PhenothermTM Class '0' Rigid Phenolic Foam Pipe Support, Pipe, Duct Support & Board Insulation



Sheet Metal
Ductwork Insulation



Chilled Water
Pipework Insulation

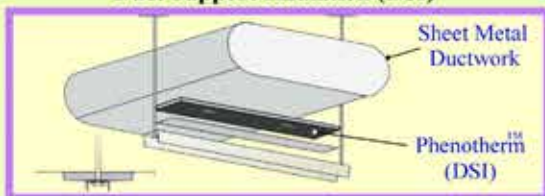


Cutted 90° Pipe Elbow
Insulation

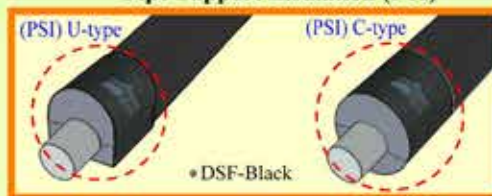


ISO 9001:2015
Certified By BSI
Cert. No. FM 40753

Duct Support Insulation (DSI)



Pipe Support Insulation (PSI)



Insulation Slab for Raised-floor



PhenothermTM Rigid Phenolic Foam Insulation is the **PROFESSIONAL'S CHOICE** for Pipework & Ductwork in HVAC/R System

- ★ Rigid insulation ensure the final performance, **NO COMPROMISE ON WALL THICKNESS** as other flexible insulation materials.
- ★ Pipe insulation **WALL THICKNESS IN SINGLE LAYER** from 15-150mm.
- ★ **NO AIR-GAP** after proper installation, insulation ID cut to top-fit pipe OD.
- ★ **PERFECT HARMONY** with pipe support in same materials.
- ★ **OPTIONAL SURFACE COLOUR** such as Aluminium, White or Black, can match colour with most of the insulation materials in market.
- ★ **EASY & FAST INSTALLATION** (As Easy As ABC)
 - Apply adhesive.
 - Snap-on Pipe Support/Pipe Insulation.
 - Seal with Aluminium Tape.

ADVANTAGE
Labour saving + Time saving
= Money saving !

2019 onward...

EASY JOB



SOLE AGENT / STOCKIST :



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