



邁向五十周年  
**Anniversary**

會員通訊

Summer 2010

Newsletter

# 香港空調及冷凍商會有限公司 THE HONG KONG AIR CONDITIONING AND REFRIGERATION ASSOCIATION LIMITED



Rm. 1801, Tung Wai Commercial Bldg., 109-111 Gloucester Road, Wanchai, Hong Kong.

■ Tel : (852) 2598 0101 ■ Fax : (852) 2598 0102 ■ E-mail : [info@acra.org.hk](mailto:info@acra.org.hk) ■ Web Site : [www.acra.org.hk](http://www.acra.org.hk)



Daniel Chong  
President

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## MESSAGE FROM THE PRESIDENT

邁向五十周年

The weather is getting warmer in time while we all are busy as usual on our daily business schedule. Yes, summer is approaching. There is a lot, or may be perhaps, that we have had done in making a living and/or shaping our companies to suit the competitive market. The art of winning more projects with promising result year after year still remained as a black-hole to all participating in the construction industry. Why we need more and more cut-throat projects in keeping all staff at work and hoping for making marginal profit through the bulk material & equipment purchase process and by squeezing the labour cost by taking advantage of accumulative critical mass on each individual trades? Can we tune our focus on quality installations with more on environmental consideration, green and energy efficient products and the sustainability on both operation and maintenance throughout the operative life cycle of an establishment? It would only be a dream if we all can only see our hands with no consideration on others around us and are less concern on the aging problems with our skilled hands-on professionals. Let's work collectively and setting reasonable profit margin for each tenders; allow more resources in promotion, recruitment and organizing comprehensive practical training programme for new-blood. To turn our industry into a new dimension with quality installations and revert our professions to young and energetic status, your contributions and joint effort is needed in creating healthy business environment for fellow contractors & suppliers; attractive and promising career path for the younger generation. Capital investment on advanced machineries and site facilities such as robotic welding & cutting system, total computerization operation & monitoring system, advanced mobile working & lifting platform and off-site modular prefabrication process would also be added value for quality installations.

My two-year term of office as President is coming to an end in June 2010. Over the years, our voices on more tender opportunities on Nominated Sub-contract and say "NO" to domestic sub-contract was loud and clear. Our concerns and views on long overdue project payment; unfair sub-contract arrangement; sole-source equipment in tender specification; worker registration system; building energy code; general specifications up-date; wages monitoring system; design and build projects; pre-insulated duct system.... were well received by the concerned parties. The meaningful CPD courses, the enjoyable social activities and the wonderful annual and spring dinner.... all lighting us up with colourful memories. Please join me to extend my sincere thanks to all council members for their tremendous effort and contributions in making all these possible.

The next AGM will be held on June 11, I plead for your kind support and sparing your time to be present at the AGM and to witness the forming of the new council for 2010-2012. ACRA smile better, I look forward to seeing you all at the AGM. ◦



# ***Uplifting Energy Performace in Buildings***

## **Quality Assurance On M & E Installation**



In the recent years, technical terms such as sustainable design, energy efficient, indoor air quality and green building are avowed in every aspect on building construction industry. While the building developers, architects and the design engineers are emphasized in building and system design demanding on all such specialized trades and features, the communication between designers and the system providers plays an important part leading to the success of a project. When the construction is practically completed, verification of the system performance and functioning conditions of all components to the design intent, in the past, is relied on the performance of the concerned sub-contractors. To establish the base-line system parameters in formulating the measurement on the building energy efficient can unlikely be achieved if the system performance is not correctly commissioned. For the best interest and long-term benefit of the owner in the investment on the building establishment, total commissioning service includes all phases of the design and construction process could provide best possible results. The areas of the commissioning service include:

- ▶ Pre-design & System Recommendation
- ▶ Design & System Planning
- ▶ Construction Monitoring
- ▶ T & C Documentation
- ▶ Testing & Commissioning
- ▶ System Run-in & Verification
- ▶ Operation & Maintenance Advice and Appraisal
- ▶ Operation Management & Documentation
- ▶ Re-engineering

## **Commissioning Service Providers**

The role of commissioning service providers (CSP) is to facilitate the communication and coordination between all parties in a systematic approach to ensure that the design intent can be practically adopted and constructed on site; ease of operation and maintenance; proper documentation; correctly T & C.

The CSP can either be employed under the project M & E consultant or directly work for the owner to provide independent services in the entire commissioning process. The nature of commissioning service is of practical knowledge basis, CSP must be a house of specialists with:

- ▶ Solid experience on M & E system
- ▶ Proficiency in planning and documentation
- ▶ Experience in T & C
- ▶ Experience in BMS and control system
- ▶ Familiarity with energy management programme
- ▶ Practical knowledge on HKSAR' s rules, regulations and procedures





## Commissioning Process Overview



CSP promote a quality assurance approach and traceable documentation in all stages of the project resulting in great value and benefits to the owner. It is recommended to incorporate the commissioning services from the planning stage of the project. However, in many situations, it is implemented when the project construction is about to complete. Although it is not a cost effective or time saving approach, all the unsatisfactory installation and improper T & C works can still be recorded without bias. Regardless of which stages of the project acquiring commissioning process, the benefits are ready to see including but not limit to;

- ▶ Quality assurance on proper installation and T & C
- ▶ Lower energy and operation cost
- ▶ Better operations and maintenance
- ▶ Improve reliability and availability of the M & E system
- ▶ Less complaint from the users and tenants
- ▶ Less corrective measures on the installation
- ▶ Comprehensive record and documentation for the system/equipment services life-cycle.



Fig 1. Equipment used for Testing & Commissioning







Fig 2.Engineer collecting the on-site data

## Conclusion and Recommendation

An energy efficient building can start with re-engineering on the existing installation of a premise. In general, 5 to 10% of total energy cost can possibly be achieved in a shopping mall or a commercial building just by re-adjusting the operation sequence and on/off mode of the chiller plant; re-calibration on temperature setting of the MVAC system/equipment and re-programme the on/off and control on the entire ventilation system. Needless to mention other possible means on electrical installation, plumbing & drainage installation and lift & escalator installations, an energy efficient building can be achieved by the professional services of the CSP.

The merits on adopting CSP' s services are accountable for both new projects and existing buildings. Their quality assurance on the M & E services is not just on energy efficiency but also the indoor air quality, the verification on the F.S., ventilation system and a lot more. So why not consider to employ a CSP for your upcoming projects.

### Reference:

- 1) AABC Commissioning Guideline
- 2) NEBB Procedural Standards for Building Systems Commissioning
- 3) AABC National Standards For Total System Balance
- 4) ASHRAE Standard ANSI/ASHRAE 111-1988
- 5) AABC test & Balance Procedures •



# DDS

## "無滴汗風咀" 沒有倒汗水的風咀



以日本先進技術於風咀表面用靜電植上絨毛纖維尼龍 66。可防止結露水滴,防霉,防菌及不助燃功能。消防證書 BS:476 Part 6 & Part 7。"無滴汗風咀"特別為商舖及食肆出入口冷氣位而設,完全防止因"滴水"而產生的不便與問題。

# DDS

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陳廣震先生  
Mr. K. T. Chan

## 《青雲路的起點》

訪問當中發覺陳廣震先生的一派英國紳士口音，原來陳先生他笑著形容自己在蘇格蘭作為「苦學生」三年，在50年代不能奢侈地乘搭飛機，只可乘搭沒有冷氣的郵船，28日才到達英國！當然他除了一邊工作，一邊上課半工半讀，才考獲IMechE銜頭外，努力自修惡補英語亦是他重要學習生活目標。而此語言基礎大有助於他日後的事業發展。

陳先生的事業由1956年加入怡和機器公司由只有4名組員的冷氣部開始。當時商用空調市場主要由怡和機器公司代理的York及北極公司American Engineering代理的Carrier兩大品牌營造商主導。在沒有專業設計顧問環境中這兩家公司投標工程時需由客戶提供之建築圖中在標書內提出整套空調系統的設計圖則，計劃書與工程規格及標價。如中標，工作須要繪畫整個工程設計細節及施工圖則。這種慣性做法，直至60年代中期JRP在香港成立分部，引入顧問服務才結束。但正因此如此久經在無助、無先例、無依靠環境下的磨練，陳先生方能徹底吸收空調，冷焄藏，冷媒，採暖，供冷，估算等與空調系統有關之最基本學識，亦體會到機電工程的背景知識在該全方位系統中所佔的重要位置。

## 《沒有不可能的事》

最初在50年代家用冷氣機是最重要的市場，兼且是主要收入來源。但隨著城市發展需要，怡和機器終在60年初取得第一紙大型商用空調工程合約，為中環於仁大廈 Union House〔後改名為太古大廈〕。由陳先生主持設計安裝，在這座樓高20層的大廈裡有很多個全港「第一」：第一次用離心機〔兩台600冷噸〕；第一次採用6.6 kV高壓摩打；第一次安裝大型海水冷卻系統；第一次用上過千台風機盤管FCU；第一次離心機配有熱泵安裝等等……可是要創造「第一」，絕非易事。他當時就發揮了年輕人的大膽創意，領導同事共同解決怎樣從舊遮打道卜公碼頭（現已搬遷赤柱海灘）抽入海水至於仁大廈地庫主機房之海水泵，人手操作逆向製冷熱泵循環系統，在20層60米高的大廈〔當年可算是摩天大廈！〕首次安裝三管等磨損冷凍水系統等等一連串複雜又無前例的工程。多得前輩們的創意與毅力，他們不單創了先河，而類似的系統設計概念亦一直被廣泛採用至今。在怡和機器工作了14個年頭，陳先生於1970年轉投JRP，再先後於香港置

第一次與今期「人物專訪」的主角－陳廣震先生見面，只覺他溫文儒雅，好像跟空調工程行業沾不上半點關係。但事實上陳先生已在這個行業打滾了接近45個年頭，他的練歷人生可不像他外表一樣，而是一段段大膽的冒險旅程。

地集團，巴馬丹拿，美邦擔任要職。在哪裡他再次參與了另一批「第一」：如在置地廣場採用了全港第一套用風管靜壓末端變風箱低壓VAV系統。而往後，他的事業發展逐漸邁向高峰，領導多個在香港，澳門及中國內地的大型項目，包括交易廣場，渣打銀行總行重建，怡和大厦，順德新世界酒店，北京涼馬河飯店加建等等。

## 《苦但滿足》

陳廣震先生說他那一代的工程師雖然要「一腳踢」兼且只靠一雙手、一支鉛筆，一把Tee square尺，一套Set squares尺，一支Slide rule「計算尺」和Tracing paper「透明圖紙」闖天下，但他仍覺得自己較現在的工程師更有幸福及滿足感。例如，當時所有制冷水系統都是由代理商分別訂購壓縮器，制冷凍水器，散熱器，冷媒，冷媒控制器，摩打等不同組件，由工程師自行選型，設計，繪圖及組裝。要到70年代方有套裝冷水機組進口。所以比起現在業界普遍偏向仔細分工之專才培訓的話，陳先生認為當時的通才在職訓練無疑更能讓工程師全面吸收多種不同廣泛的學識。

## 《給後輩的錦囊》

儘管今天的科技給了我們在工作上很大的方便－只需依指示將數據輸入電腦系統，便能自動計算出所要的結果，甚至製作簡報，但陳先生仍建議新入行的工程師要多花一些時間，切實學習系統設計當中的基本理論邏輯，打好根基。而對有意入行的年輕人，則建議先由機械或電機工程學起，有了該兩工程基礎，方可進修屋宇設備工程。

最後再次感謝陳廣震先生從加拿大返港時，特意抽空接受我們的訪問，分享他的專業經驗及人生點滴。在此謹祝陳先生身心安康及生活愉快！





## Background Information of the Construction Charity Fund

The construction industry is committed to raising the public's awareness of industrial safety. Statistics have shown that the number of industrial accidents in the construction industry has been declining in recent years. With the high-risk nature of construction activities, however, accidents could not be totally eliminated.

To show our concern and recognition for colleagues who suffered injuries or died in fatal industrial accidents, the construction industry has joined hands to organize a compassionate charity fund named the "Construction Charity Fund" (the Fund) to provide immediate financial assistance and condolences to families of colleagues who died in construction related accidents, initially.



The Construction Charity Fund was co-founded by Legislative Councillor the Hon Mr Abraham SHEK Lai-him, SBS, JP, Hong Kong Construction Association (HKCA), Hong Kong Federation of Electrical & Mechanical Contractors (HKFEMC), Hong Kong Construction Sub-Contractors Association (HKCSA) and Hong Kong Construction Industry Employees General Union (HKCIUGU). Since it started operating on 1 October 2009, the Fund has given out more than HK\$1.89 million to 27 families as condolence payments. The Fund was formally launched on 26 February 2010, which officiated by Mrs Carrie Lam, JP, Secretary for Development.

In addition to financial support, the Fund is planning to arrange social workers to provide counseling service for individual family members of the deceased. If it were deemed appropriate, the Fund would also refer the families to other charitable organisations, e.g. the Lighthouse Club to apply for education subsidy for their school-age children. By doing so, we hope to reduce stress caused by financial and psychological burden to the affected families so that they can get back to a normal life quickly.



## 建造業關懷基金背景資料

建造業一直致力提升工業安全意識，所以近年的意外個案數字亦有不斷下降的趨勢。然而，建造業屬高危行業，故發生意外的機會仍較其他行業高。為了對意外受傷或身亡的同業展示關懷及肯定其對建造業的貢獻，業界代表籌辦了這個名為「建造業關懷基金」的體恤基金，初步以建造業內發生意外而身亡的工友之家屬作出即時經濟援助，並送上深切慰問。

由立法會議員石禮謙先生，SBS，太平紳士、香港建造商會、香港機電工程商聯會、香港建造業分包商聯會及香港建造業總工會攜手籌辦的「建造業關懷基金」。自2009年10月1日運作至今已發放逾港幣189萬元的款項，向27個因工業意外死亡的建造業從業員之家屬發放慰問金以解燃眉之急，亦藉此表示業界對從業員的深切關愛。基金於2010年2月26日正式成立，並獲發展局局長林鄭月娥太平紳士見證。

除了經濟上的支援，基金更計劃安排社工跟進個別個案，為死者家屬提供輔導。如有需要，基金更可協助轉介至其他慈善團體，例如明建會，以幫助他們申請其下的教育基金，為死者子女提供學費資助，務求把不幸發生意外的同僚家屬之經濟及心理負擔減至最輕，讓他們盡快過回正常生活。



於2010年2月26日關懷建造業基金啟動儀式暨慈善籌款午宴  
Launching Ceremony and Fund Raising Luncheon for the Construction Charity Fund  
on 26 February 2010



## What is a VAV Diffuser and how do they work?

Essentially a VAV Diffuser is a conditioned air diffuser that has a variable geometry capability to manage, or rather regulate, the supply air volume to satisfy a changing load requirement within its area of control.

While there are mainly two types of VAV Diffusers, for the purposes of this subject we will primarily focus on thermally actuated version / type. These give significant first cost benefits over the predominant other type, being electrically activated, however many of the benefits detailed in this pages will also apply to the electrically actuated type as well.

The VAV Diffuser has some methodology of sensing the zone load, such as a temperature sensor, then utilizing this control signal, against a desired set-point, open or close a physical mechanism to either restrict or increase the supply air flow into the zone. The temperature sensing can be carried out utilizing a remote temperature sensor via a controller then providing a mechanical movement via an electric actuator in the case of electrically actuated VAV Diffusers or a "built-in" sensor within the mechanism that through fluid dynamics senses "induced" room air. In the case of most thermally actuated VAV Diffusers this sensor is usually also the actuator that supplies the mechanical movement on the damper mechanism within the VAV Diffuser.

(Fig 1.) shows a simple cut-away of a thermally actuated VAV Diffuser and demonstrates how the room air is induced into the VAV Diffuser and across the sensor/actuator.

In this example the majority of the supply air exits the VAV Diffuser around its peripheral edge, due to its relatively constant high velocity it provides excellent Coanda which results in very high secondary air entrainment (room air). A small portion of this supply air is fed through the venture nozzles behind the "appearance panel" and this causes a slight pressure differential resulting in the induction of the room air across the room sensing thermostat thus providing the mechanism with a reference point for control.

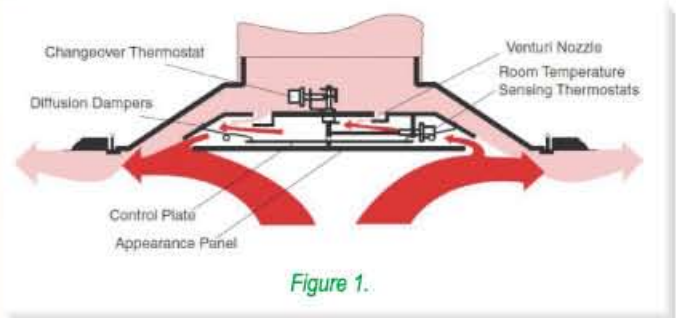


Figure 1.

In thermally actuated VAV Diffusers this room sensing thermostat (Fig 2.) is typically a sealed wax filled element, that has well defined, and repeatable, characteristics at normal operate temperatures. As the sensing element is heated up via increasing room load (room temperature) the wax in the element melts and expands, pushing a piston against the volume changing mechanism. As the sensing element cools down, via drop in room temperature, the wax cools and contracts and a spring pushes the mechanism back against the piston.

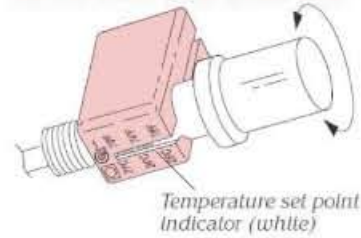


Figure 2.



As the physical reaction of the element is consistent against temperature, to effect a set-point change is a simple matter of having some methodology of predefined lineal movement of the whole sensing element against a linear scale enabling modification of desired set-point control.

#### ADJUSTING TEMPERATURE



The VAV Diffuser while varying the volume of air supplied to the zone, maintains the relatively constant discharge velocity therefore maintaining the coanda throughout its normal operating range, which includes the lower turn-down ratios compared to the VAV box. This results in very good entrainment of secondary air and hence maintains all the necessary comfort conditions as required, good air movement, superior temperature control, high air change, or ventilation, effectiveness.

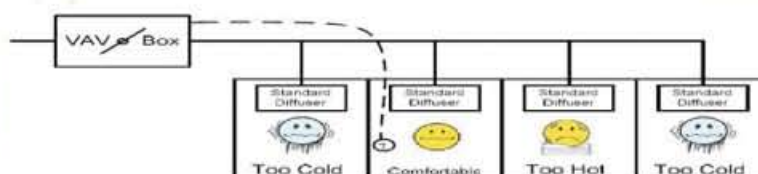


Another significant contributor to the “Superior Air Distribution” comparison is the inherent compromise introduced into a VAV box system.

Specifically the issue of utilizing a single reference point for control of the VAV box, while delivering air through many more diffusers. While this may be suitable as a form of coarse control in a large relatively static open plan environment, it certainly has been shown to be a significant failure in areas where multiple individual offices are supplied by a single VAV box.

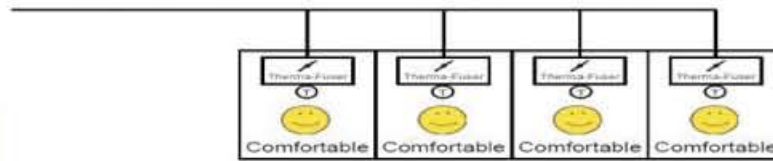
The question always gets asked, “which office has the temperature sensor”, and the resulting “power” to manipulate the set-point of all those around them, if needed or not?

The figure below graphically represents this typical and almost unavoidable VAV box dilemma.





With the VAV Diffusers applied, now each separate office is an individual zone of control, with individual set-points for each individual tenant.



## Why use a VAV Diffuser over a VAV Box?

The key benefits to using a VAV Diffuser system over a VAV Box based system include:

1. Lowest energy VAV terminal, maximize energy star / LEED / Green Star Benefit from lowest energy usage
2. Easily adapts to office layout changes, a future- proof HVAC design
3. Lowest first / capital cost per zone of control
4. Superior air distribution, comfort air provided
5. Low to no maintenance, lowest life cycle costing solution

This five key benefits or differentiators of the VAV Diffuser system vs. the traditional VAV box system provide significant enhancement to any HVAC VAV design without any adverse consequence or compromise.

The challenges for today's Designers are all quite complex and necessitate significant analysis to enable designs to meet and indeed exceed ever evolving sustainable design initiatives, to develop long term operationally sound buildings that will continue to deliver on the initial intent.

While it is clear that VAV box systems will continue to find their place in future HVAC solutions, the preceding points should provide sufficient incentive to review the VAV Diffuser solution as a preferred system for future VAV applications.

This five benefits of a VAV Diffuser system over a VAV box system support the key criteria for an HVAC system without imposing any adverse consequence or compromise and should stand to any robust scrutiny. •



Engineered for flexibility and performance.™



# McQuay In The World

Your climate, We're there.



**McQuay Wuhan** was setup and launched its first product in 1996 and now becomes the main manufacturing center of central air conditioning product of Daikin- McQuay Group. Main products include : water cooled centrifugal chiller WSC/WDC (R134a, 300RT-2600RT), water cooled screw chiller PFS (R134a/R410A, 110RT-640RT).

**McQuay Wuhan** owns the ISO9001, ISO14001, ISO18001 certifications and is also certified by ARI, ASME, PED etc. State of art production line and restricted quality assurance system guarantee that every product delivered by McQuay Wuhan is in high reliable and sustainable standard.



**McQuay Air-conditioning Ltd.**

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- \* Sterilize Indoor Air
- \* Wastewater Treatment



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### *Non Chemical Water Treatment System*

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- \* Corrosion Control
- \* Biological Control
- \* For Light or Heavy Industries
- HVAC
- Cold or Hot Water
- Power Station
- Any Water Circulating System



Before

After



Before

After



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Tel.: 2116 9021 Fax.: 2884 9862 E-mail: dsl@dsuccess.com.hk





## ENERGY SAVING SOLUTION

### Variable Frequency Drive (VFD)

ATAL now offers complete line of Variable Frequency Drive (VFD) product from Vacon. Vacon is the leading VFD manufacturer and has R&D and production facilities in Finland, the United States, China and Italy, and sales offices in more than 25 countries.

VSD can save energy in the following HVAC applications:



#### Pumps

- Chiller
- Heating
- Booster
- Pressurisation set
- Cold and hot water pumps
- Cooling tower pumps
- Delta P regulation on heat exchangers
- Swimming pool pumps



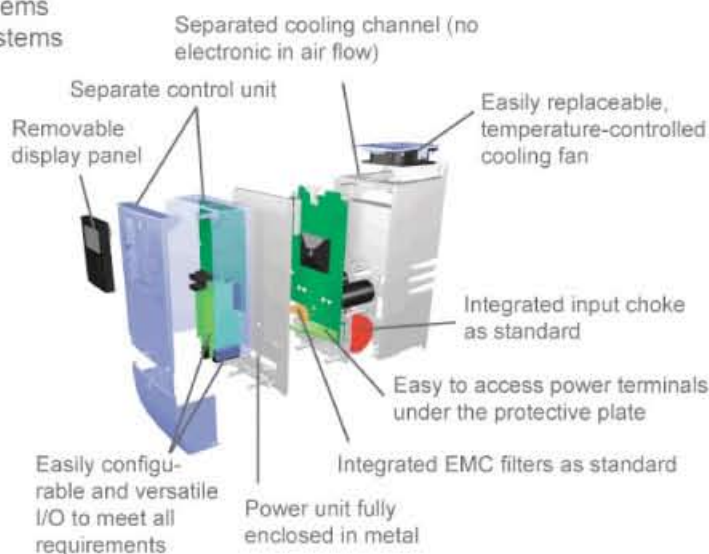
Complete line of VFD Drive

#### Fans

- Supply and extract ventilation
- Variable Air Volume VAV systems
- Constant Air Volume CAV systems
- Cooling tower fans
- Condenser fans
- Boiler fans
- Car park ventilation fans
- Stairway ventilation

#### Compressors

- Chilling
- Clean air compressors
- Gas compressors
- Heat pumps



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Analogue Technical Agencies Ltd.

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WINSTON AIR CONDITIONING & ENGINEERING  
(HONG KONG) COMPANY LIMITED

Tel: (852) 2764 1200 Fax: (852) 2764 0465  
Website: [www.winston-hk.com](http://www.winston-hk.com)



## ClyNix Tapping Process

- Tee-off new branch pipe while the MVAC system remains in normal operation
- No need to drain & re-fill the MVAC system
- No need for pipe freezing
- Environmental friendly process





## Festival Walk Project

*Saving 25% Energy Consumption  
Cutting Carbon Emission by 2,700 Metric Tons per Annum*



Festival Walk is a seven-storey premier shopping centre in Kowloon Tong, Hong Kong, managed by Swire Properties Limited. It offers over 980,000 sq ft of shopping space which includes world-class brand flagship stores, ice-skating rink, cinema, restaurants, etc.

### Green Initiatives

In 2008, Swire Properties initiated a comprehensive study and review of the energy management performance of the building chiller plant at Festival Walk. The central chiller plant was originally equipped with six sets of water-cooled open type centrifugal chillers which had been operating for about 10 years. The HVAC contractor was appointed to provide design and building solutions for a new chiller plant with optimised energy savings.

With intensive effort on reviewing the existing plant conditions and energy simulations, a total energy solution proposal was subsequently in place to convert the existing system to a more efficient system with the following features:

- High efficiency chiller
- Chiller Plant Control
- Variable Primary Flow (VPF) system
- Cooling Tower Optimisation (CTO) control strategies
- Full maintenance service for the HVAC equipment

**High Efficiency Air Conditioning System and Equipment**  
In consideration of the year-round cooling load profile of the shopping centre, four sets of existing chillers were replaced by three sets of 1,300 TR water-cooled direct drive centrifugal chiller and one set of 300 TR water-cooled screw chillers (for night duty). The highly appraised energy and operating performance of R123 chiller which gave customers a proven record of efficiency was surely a vital factor for project success.

### System Optimisation



Apart from the equipment, upgrading the control system of the existing chiller plant was included. With application of the VPF and

CTO, the pump and cooling tower energy were optimised and maximised on the energy saving front.

The project solution will help the customer to save 3.8Mwh per year<sup>1</sup> with project payback period at less than five years and subsequent reduction in carbon emission was up to 2,700 metric tons<sup>2</sup> per annum. ◦

### Project Summary

Project Site	: Festival Walk
Client	: Swire Properties Limited
Client award	: Client of the Year-Low Carbon Operation Award of the CIBSE Low Carbon Performance Awards 2010
HVAC Contractor	: Trane Service Hong Kong
Chiller Supplier	: Trane
HVAC Control System	: Trane
Completion Date	: Q4 2009

Note: <sup>1</sup> Energy savings figure between May 2006- April 2007 (baseline) and May 2009 - April 2010.

<sup>2</sup> Based on carbon emission of 0.7 kg CO<sub>2</sub> / kwh.



# Professional's Choice

Cradle Type Pipe Support



## Easy & Fast Installation

★ As Easy As ABC ★

- A. Apply adhesive.
- B. Snap-on Pipe Support/Pipe Insulation.
- C. Seal with Aluminium Tape.



**PHENOTHERM**™

聚溫® 環保泡酚

CFCs & HCFCs Free Phenolic Foam Insulation (Zero ODP)

### ★ PERFECT HARMONY

Pipe Support in same materials.

### ★ ENSURE THE FINAL INSULATION VALUE

Rigid Insulation, no compromise on wall thickness as other flexible elastomeric materials.

### ★ NO AIR-GAP after proper installation

Cut to top-fit pipe OD.

 **P-flex**® Class '0' & Class '1'

Flexible Closed-cell Elastomeric Insulation

## Features and Characteristics

- ★ CFCs & HCFCs Free (Zero ODP)
- ★ Good resistance to water & vapour permeability
- ★ Conform to Class '0' &/or Class '1'
- ★ Flexible material, easy for installation
- ★ Closed-cell rubber foam structure with built-in skin/vapour barrier



**P-flex**® Class '0'  
Sheet Insulation  
(Black Colour)



**P-flex**® Class '0' & Class '1'  
Tube Insulation  
(Black Colour)



**P-flex**® Class '1'  
Tube Insulation  
(Off-White Colour)



Off-White Colour

**P-flex**®  
IDH-14  
Insulated Drain Hose  
(Length : 20m/Roll)



Black Colour

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## 中國制冷展2010訪京團

闊別北京四年的中國制冷展終於在今年四月重回北京舉行。這冷凍空調界一年一度的盛事，規模越來越龐大，一般的展覽場地也不足以應用，經過多年的籌備和建築，新北京展覽館的出現才能解決北京大型展覽場地不足的問題。

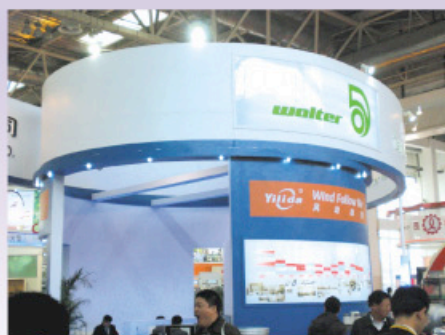


今年中國制冷學會為了隆重其事，誠邀多國代表出席開幕典禮。香港空調及凍冷商會和中國制冷學會經過多年的合作，自然也在其邀請之列。今年在會長莊國明先生的帶領下，再加上主席葉啟賢先生、兩位副會長余達志先生及陳志雄先生、理事梁栢泉先生和前會長陳家龍先生等人，眾人於四月六日中午從香港出發前往北京。為了讓會員也有機會參予，商會也組織了一個小型參觀團，由胡志輝先生組織和帶領下，隨團出發。

大隊到達北京後，馬上安排入住酒店，並於當天晚上出席中國制冷展的歡迎晚宴。多國冷凍空調界代表濟濟一堂，場面非常熱鬧。宴會後大家意猶未盡，再到著名的“后海”暢飲一番。







第二天早上，大家準時到達北京展覽館參加大會的開幕典禮，隨即開始參觀。今年有超過一千個參展商參展，自然吸引了很多業內人士前來捧場。雖然場地較新和寬敞，但很多設施都未能發揮最高水平，還有很多改善的空間。為了為“香港廠家”打打氣，參觀團馬上挑選了幾個來自香港製造商的展覽單位去參觀。晚上，眾人再次出席大會為參展商而設的接待晚宴，對中國制冷展的熱情安排，我們感到非常滿意。



第三天早上，首先參觀北京地下鐵第四條支線的空調和通風系統。這條支線從南到北，把位於市郊的頤和園和圓明園與市區連在一起。中午得到會長悉心的安排，大家在北京“香港賽馬會”享受了一頓豐富的午膳。下午，我們參觀了北京環境國際公約履約大樓，大家對它使用的先進節能設備，都大開眼界。



第四天早上，大隊安排了自由活動。下午我們便啟程返回香港，雖然時間及行程安排非常緊密和匆忙，但大家對這次一舉多得的行程安排，都感到獲益良多。





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#### High Collection Efficiency

- 99.999955% @MPPS
- U16 to EN 1822
- Meets I300i specification
- Scan test with PSL

#### Low Pressure Drop

- Up to 30% lower
- Reduces energy cost
- Reduces construction depths

#### Low Off Gassing

- Extreme low impurities
- No Boron
- Low Dopant Content

#### High Durability

Reduces transport and installation damage

#### High Acid Resistance

Hydrofluoric Acid resistance

### Perfect Filter Media

Compared with micro-fiberglass media, the MEGAcel's PTFE media provides superior benefits including inert chemical properties, more uniform fiber distribution, smaller fiber diameters and pore size, which reduces resistance with higher filtration performance to achieve substantial energy savings.

PTFE membrane media



Figure A (1,000x)

ULPA micro-fiberglass media



Figure B (1,000x)

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Automatic Cleaning System



Solar Hot Water Panel



Cooling Tower



Chilled Water Additive



Separation System



## The 5<sup>th</sup> 'Training for Workers in Handling HFC & Blend Type Refrigerants'

The 5th 'Training for Workers in Handling HFC & Blend Type Refrigerants', which is organized by ACRA and VTC, was successfully held in November 2009. There were 30 HVAC practitioners enrolled in this course. The theory class was conducted at IVE (Morrison Hill) while the practical training was held at Pokfulam Skills Center. We would like to express our sincere thanks again to VTC for providing the venue and Mr Michael Leung (Carrier Hong Kong Limited) for his valuable time and experience/skill shared at the class.



## ACRA 48<sup>th</sup> Anniversary Dinner

The annual dinner of 2009 was held on 30 November 2009 at the J W Marriott Hotel Grand Ballroom. More than 500 participants including members and friends from the industry attended this event. It is our honor to have Mr Stephen CHAN Hung-cheung, Director of Electrical and Mechanical Services, as our Guest of Honor and delivered the opening speech for our annual dinner. Every body really enjoyed a lovely evening of great program and friendly atmosphere.



## 2009 機電安全健步嘉年華

本會贊助由機電工程商聯會及機電工會聯合會合辦的機電安全健步嘉年華。活動在2009年12月6日於粉嶺香薰園舉行，共一千一百多人參加。節目包括健身操、郊野公園健步行、燒烤及抽獎等。健步嘉年華由2003年開始每年在12月舉行，目的在推廣機電業安全及健康。本會會員亦積極參與是項活動及提供贊助。





## ACRA Spring Dinner 2010

ACRA 2010 Spring Dinner was successfully held on 8 March 2010 at the King Palace in Wanchai area. More than 150 participants including members and friends from the industry attended this function.

WELCOME AIR-TECH LTD. had sponsored and conducted a technical presentation. Besides, there were also the very exciting beer competition, games and lucky draw as some of the highlights of the evening. Everybody had a good time at this great dinner and gathering.



## 2010 Golf Competition (Gotop Cup)

This function was held on 16 April 2010 and sponsored by Gotop Engineering Limited. It was a gorgeous sunny day that is fit for golf function and all golfers enjoyed the friendly competition. There were total 60 participants took part at this tournament. The results are as follows:

Highest stableford - Mr Eric Leung  
2nd Highest stableford - Mr Benjamin Chan  
3rd Highest stableford - Mr Pit Chi Ping  
Longest drive - Mr WK Choi  
Longest drive - Mr Eric Leung  
Nearest to the pin - Mr Gary Hui  
Nearest to the pin - Mr John Collier





## Horse Racing Night

"Horse Racing Night" was held on 19 May 2009 at Happy Valley, Hong Kong. A mini game of contest was held amongst the ACRA participants where the winner would be awarded a cash coupon. All have fun and enjoyed the function very much.



▲2010賽馬夜團體合照



▲與嘉賓合照



▲賽馬大亨計獎金遊戲冠軍 Mr. Vincent Chan



▲賽馬大亨計獎金遊戲亞軍會長 Mr. Daniel Chong



▲賽馬大亨計獎金遊戲季軍 Mr. C.F. Wu



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**Kembla** (HK) is a specialist distributor of pipes, valves and fittings delivering to a broad cross-section of markets such as plumbing and drainage, HVAC and fire services. Warehousing facilities reduces delivery times and retail shop offers additional delivery options. Products are sourced from a number of top manufacturers. **Kembla** (HK) is moving forward by growing the business with new products and value added services.



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<b>SEAF</b> STEEL FITTINGS	<b>SEAF</b>	: Black Steel Fittings - BS 1965 / BS EN 10253
<b>TM</b>	<b>TM</b>	: Galvanized Steel Fittings - BS 143 & 1256 / BS EN 10242
<b>Grinnell</b> MECHANICAL PRODUCTS	<b>Grinnell</b>	: Grooved Couplings and Fittings - WRAS Certification, with FM / LPC / UL approvals
<b>K-TOP</b>	<b>K-Top</b>	: Ductile Iron Pipes & Fittings - BS EN 545 / BS EN 598. K9, K12 up to 1200mm DN Nominal size
<b>Vinidex</b>	<b>Vinidex</b>	: uPVC Pressure Pipes & Fittings - BS 3505 / BS 4346
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- 200 & 300mm extended drain pan
- 2-ways valve

### Standard features:

- Air performances 400~1,400CFM
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- Extended drain pan

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**NEW!!!**

### Standard features:

- Add-on flexibility
- Compact size
- Easy delivery & installation
- Good COP during part load
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Cooling Type	Water Cooled		Air Cooled	
Series	SMSW	SMRW	SMSA	SMRA
Compressor Type	Screw	Scroll	Screw	Scroll
Cooling Capacity (Tons)	58~1,090	38~718	64~803	36~916
Dimension LxWxH (mm)	2,030x550x1,895	1,650x550x1,800	2,300x2,200x2,240	1,800x2,800x2,050



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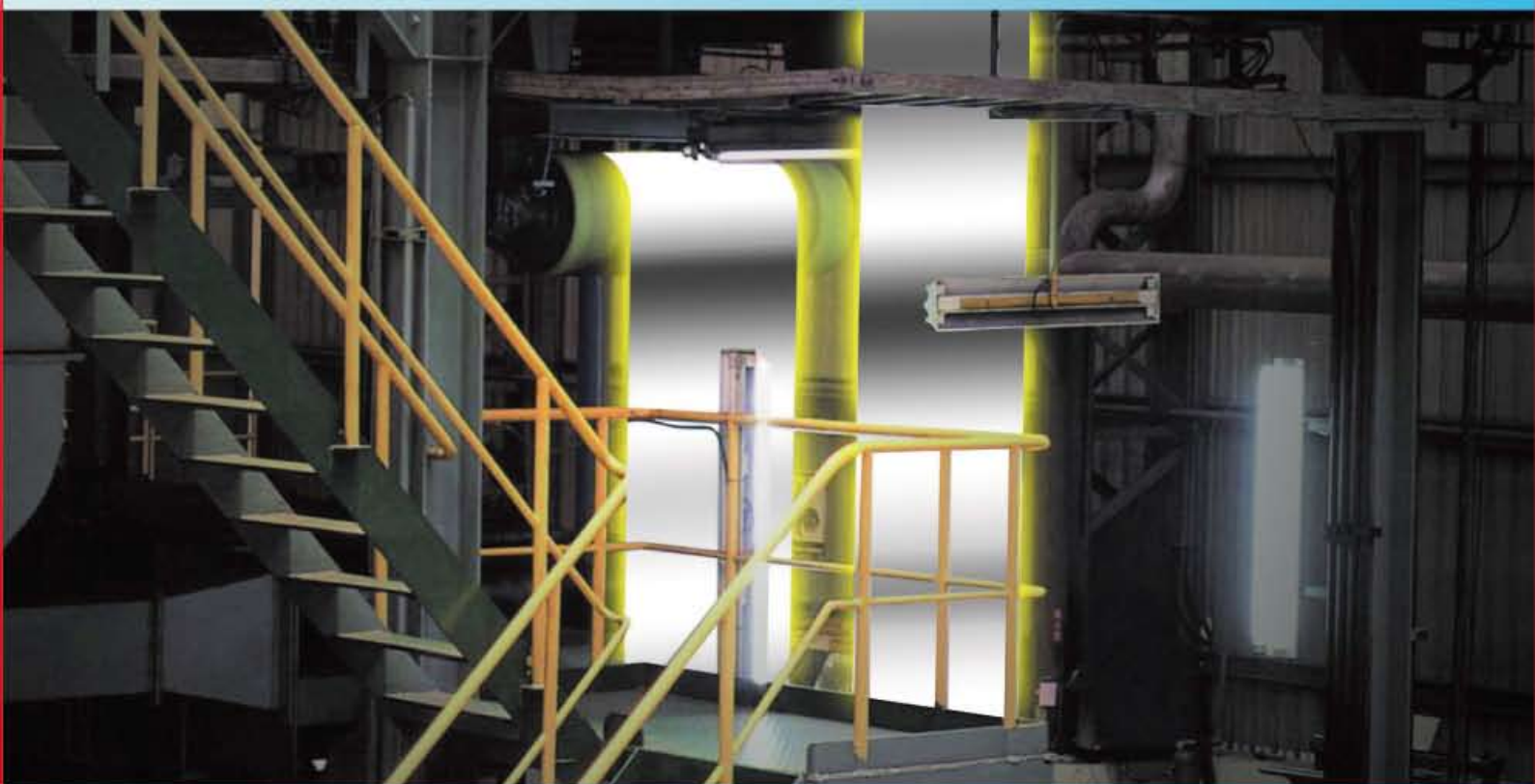
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## Anniversary

COMPANY NAME		CONTACT NO.	TRADE
ATAL Engineering Ltd.	安樂工程有限公司	2565 3339	E&M Contracting
Carrier Hong Kong Ltd.	開利(香港)有限公司	2694 5618	Air-Conditioning Equipment Supplier
Krueger Engineering (Asia) Ltd.	高雅機電工程有限公司	2860 7333	Air-Conditioning, Electrical, Fire Services, Plumbing & Drainage Installation
Newland Engineering Ltd.	新陸工程有限公司	2967 8620	Registered Contractor in ACMV & Electrical Installation
REC Engineering Co., Ltd.	盈電工程有限公司	2619 8082	E&M Contracting
Shinryo (Hong Kong) Ltd.	新菱工程香港有限公司	2237 8624	Building Services, E&M Contractor
Shun Hing Engineering Contracting Co., Ltd.	信興機電工程有限公司	2419 8282	Contracting
The Jardine Engineering Corporation Ltd.	怡和機器有限公司	2807 4511	Contracting / Supplier / Building Automation / Energy Service
Trane Hong Kong	特靈香港	3128 4764	Air-Conditioning Equipment Supplier
Winston Air Conditioning & Engineering (HK) Co., Ltd.	永通冷氣工程(香港)有限公司	2764 1200	Contracting
York International (Northern Asia) Ltd.	約克國際(北亞)有限公司	2331 9286	Manufacture of Air-Conditioning Equipment
Young's Engineering Co., Ltd.	景福工程有限公司	2235 0900	Design, Supply & Installation of Electrical & Mechanical Services, Routine Maintenance Work

## ACRA Fellow Members

Alliance Contracting Co., Ltd.	聯和承造有限公司	2891 9083	Contracting
Analogue Technical Agencies Ltd.	安樂科技有限公司	2561 8278	Air-Conditioning Equipment Supplier 'Hitachi', 'Evapco', etc.
Chevalier (HK) Ltd.- A/C Division	其士(香港)有限公司-冷氣部	2111 4811	Contracting
China Overseas Mechanical & Electrical Engineering Ltd.	中國海外機電工程有限公司	2823 7888	Contracting
Chun Wo E & M Engineering Ltd.	俊和機電工程有限公司	3758 8007	Contracting
Daikin Airconditioning (Hong Kong) Ltd.	大金冷氣(香港)有限公司	2570 2786	Air-Conditioning Equipment Supplier
Efatar Engineering Co., Ltd.	怡輝冷凍工程有限公司	2606 6922	Manufacturer of HVAC Equipment
Honeywell Ltd.	霍尼韋爾(香港)有限公司	2331 9133	Building Automation Contracting
Hong Kong Thermo Industries Ltd.	香港冷凍器材有限公司	2674 6876	Manufacturer of HVAC Equipment
Hsin Chong Aster Building Services Ltd.	新昌亞仕達屋宇設備有限公司	2579 8238	E&M Contracting
Johnson Controls Hong Kong Ltd.	江森自控香港有限公司	2590 0012	Supply, Install & Maintenance of HVAC, Fire Services, E&M, Security & Extra Low Voltage System
Kervin Engineering Co., Ltd.	樂信工程有限公司	2422 3110	HVAC Contracting E & M Engineering
K-Thorn Engineering Co., Ltd.	旗鋒工程有限公司	2481 2918	Air-Conditioning & Electrical Installation
Lucky Engineering Co., Ltd.	運通冷氣電業有限公司	2780 5285	E&M Contractor
McQuay Air-Conditioning Ltd.	麥克維爾空調有限公司	2893 6261	Split type A/C, Chilled Water Fan Coil Unit, Water Cooled Package & Split Type Water Source, Heat Pump Chiller Supplier
Meco Engineering Ltd.	德寶工程有限公司	2891 8722	Engineering Contractor
Quad-Tech Engineering (HK) Co., Ltd.	高得工程有限公司	2573 1832	Contracting
Ryowo (Holding) Ltd.	菱和(集團)有限公司	2319 8381	Manufacturer for Water Cooling Towers, Water Tanks & Pumps, etc.
Siemens Ltd.	西門子有限公司	2107 6506	Building Automation AFA, Security, CCTV & ELV System
Skyforce Engineering Ltd.	天科工程有限公司	2885 1620	Building Services Installation
Southa Co., Ltd.	南龍有限公司	2963 7175	Supplier of A/C Equipment
Standard Refrigeration & Engineering Co., Ltd.	立德工程有限公司	2781 0871	Design, Supply, Installation and Maintenance of HVAC System
Takasago Thermal Engineering (HK) Co., Ltd.	高砂熱學工業(香港)有限公司	2520 2403	Contracting & Energy Service
Technicon Engineering Ltd.	得力確工程有限公司	3193 1300	Building Services Design, Installation and Maintenance
Welcome Oncho Denki Ltd.	偉基溫調電機有限公司	2806 8316	Supplier of HVAC Equipment
Westco Air Conditioning Ltd.	威高冷氣工程有限公司	2426 3123	Contracting

## ACRA Corporate Members

A & R Engineering Co., Ltd.	奇樂工程有限公司	2408 2960	Contracting
Air Master International Ltd.	雅士(國際)空調有限公司	2764 0307	Manufacturing of Air-Conditioning Equipment & Component
Air Trade Centre Ltd.	裕風先達有限公司	2887 7000	Contracting & Supplier of Air Conditioning Product
Alison M & E Engineering Ltd.	雅訊機電工程有限公司	2595 1199	Contractor
Alpha Appliances Ltd.	第一電業有限公司	2529 7555	Authorized Distributor of 'General' Air-Conditioner
Alstern Technologies (HK) Ltd.	奧思(香港)有限公司	2647 8163	Contracting
Anway Engineering Co., Ltd.	正佳工程有限公司	2598 4228	Supplier
Armaceil Asia Ltd.	阿樂斯亞洲有限公司	2574 8376	Manufacturer of 'Armalex' Insulation
Arnhold & Co., Ltd.	安利有限公司	2807 9400	To Market and Distribute A/C and Engineering Equipment for Building Construction Industry of HK & China Market
A Shing Engineering Co., Ltd.	亞成冷氣工程有限公司	2537 1818	Contracting & Supplier
Brightwell Air-Conditioning Ltd.	冠昇空調有限公司	2331 8559	Supplier of HVAC Equipment
Brisky Limited	穿梭科技有限公司	2511 3161	Supply of 4 main Themes' Comm. Split, Central Air Conditioning Ventilating Fan & Fire Rated Board
Bun Kee (International) Ltd.	杉記(國際)有限公司	2748 9319	Wholesale
Chivas Corporation Ltd.	瑞隆洋行有限公司	2521 9768	Supplier
C.J. Wishing International Ltd.	惠生電業有限公司	2799 9797	Supplier of Air-Conditioning Products - Daikin-Japan-Kimukoh-Japan, Inaba-Japan, Taco-USA, etc.
Clydeman Engineering Ltd.	佳電工程有限公司	2332 3591	E & M Contracting
Crownin Limited	冠殿有限公司	8202 0830	Contracting / Supplier / Building Automation
Dah Chong Hong (Engineering) Ltd.	大昌貿易行工程有限公司	2768 3595	HVAC Installation, E & M Packaged Installation
Delta Pyramax Co., Ltd.	佳澤科技有限公司	2511 2118	Supplier
Dynamic Success Co., Ltd.	勁技有限公司	2116 9021	Supplier of Water Treatment
Eaxon International Co., Ltd.	恩索有限公司	3590 4656	Supply of HVAC Equipment
Electrodrive Engineering Ltd.	高宜工程設備有限公司	2573 7211	Supplier
Enviro-Tech Engineering Co., Ltd.	鷹達工程有限公司	2827 0688	Supplier

## ACRA Associate Members



## Anniversary

COMPANY NAME		CONTACT NO.	TRADE
Euro Airconditioning Ltd.	歐諾空調有限公司	2323 0809	Supplier (Authorized Dealer of AC Products - Daikin, Toyo, Valmatic, Honeywell-MNG)
Ever Cool Refrigerating & Air-Conditioning Co. Ltd.	嘉穀冷凍空調設備有限公司	2356 8598	Manufacturing & Supplier
Extensive Trading Co., Ltd.	精基貿易有限公司	2889 1681	Supply of Mechanical Equipment, Building Materials, Environmental Products
Far East Engineering Services Ltd.	遠東工程服務有限公司	2898 7331	Contracting
Fook Loong (HK) Ltd.	福隆(香港)有限公司	2393 7773	Supplier of 'Phenotherm' Phenolic Foam, 'P-flex', 'Winflex 33i', 'PAL' Products, CR Pump, 'BANFF' & 'ICV' Valves
Fungs E & M Engineering Co., Ltd.	馮氏機電工程有限公司	2682 7200	E & M Contracting
GTECH Services (Hong Kong) Ltd.	英國通用工程(香港)有限公司	2123 0888	Contracting
GELEC (HK) Ltd.	香港通用電器有限公司	2919 8383	Supplier
Gether-Force Air-Conditioning Engineering Co., Ltd.	群力冷氣工程有限公司	2890 2622	Contracting
Getwick Engineers Limited.	佳域工程有限公司	2893 3600	Contracting
Goodways International Ltd.	協進國際有限公司	2575 8770	Manufacturer's Representative
Gotop Engineering (HK) Ltd.	高陸工程(香港)有限公司	2459 3038	Electrical & Mechanical; MVAC Engineering
Greatop Power Ltd.	高力通有限公司	2741 8682	Contracting, Supplier Manufacturing, & Energy Service
Great Top Engineering Ltd.	宏鋒工程有限公司	2345 2219	Contracting
Hersen System Engineering Ltd.	豪信系統工程有限公司	2884 9001	Building Automation
Honest Air Conditioning Ltd.	明發冷氣有限公司	2396 8108	Contracting & Supplier
H.W. International Air-Conditioning Ltd.	豪華國際空調有限公司	2796 8888	Manufacturer of Air-Conditioning Equipment
IES (Hong Kong) Limited	恒豐工程(香港)有限公司	2992 0830	Supply & Install Central Hot Water Plant and Seawater Plant, Supply of Equipment.
Kembla (HK) Limited	金特霸(香港)有限公司	2528 0999	Supplier
Kin Wo A/C Engineering Ltd.	健和冷氣工程有限公司	2398 0157	Contracting
Kinden Corporation		2368 6136	Building Services - E & M Works
Kinetics Noise Control (Asia) Ltd.	建力聲震控制(亞洲)有限公司	2191 2488	Supply of Acoustic Materials, Vibration Isolators, Floating Floor & Barrier Materials
Kings View Airconditioning Engineering Co. Ltd.	景匯空調工程修有限公司	2796 2417	HVAC Contracting & Maintenance
Lee Tack Engineering Co., Ltd.	李德工程有限公司	2305 3111	Registered Ventilation Contractor
Life Air IAQ Ltd.	活力空氣品質科技有限公司	3527 0106	Manufacturing & Supplier
Link The Best Company Ltd.	必發(香港)有限公司	2568 4092	Supply Pre-insulated Pipe, Air Filter, Butterfly Valve, Electrostatic Precipitator, UV Sterilizer & Other Building Material
Man Po Environment Technologies Co., Ltd.	文寶環保科技有限公司	2429 0088	Supplier
Mega Power Engineering Co., Ltd.	雄力工程有限公司	2474 9832	Contracting, Supplier of A/C Equipment
Mesan Fiberglass Engineering (Int'l) Ltd.	明新玻璃纖維工程(國際)有限公司	2787 5717	Manufacturer of 'MESAN' Water Cooling Tower; Sole Distributor for GRP Section Water Tank & Distributor of AC Equipment
Midea Electric (HK) Ltd.	美的電器(香港)有限公司	3669 4888	Supplier & Manufacturer of 'MD' Product
NAP Acoustics (Far East) Ltd.	NAP 聲學工程(遠東)有限公司	2866 2886	Design, Supply, Installation of Acoustic Treatment and Vibration Control Products
New Way Engineering Co., Ltd.	新法機械有限公司	2325 6892	Supply of Pump (Aurora, Ebara), Auto Self-Cleaning Filter (Filtermox), Spring Isolator (NSV), Motor and E&M Equipment
Oxprime (International) Ltd.	鑫輝(國際)有限公司	2590 8088	Pump, Cooling Tower, VAV Box, Vibration Isolators, Dura Duct, Liquid-Solids Separation Systems, Fibreglass Supplier
Peterson Engineering Ltd.	必德信工程有限公司	2365 0372	Contracting
Practical Engineering (HK) Co., Ltd.	百利高工程(香港)有限公司	2402 2772	Contracting & Supplier
Raising Engineering Ltd.	威信工程有限公司	2395 6081	Authorized Distributor of Toshiba & Carrier Product & Registered Contractor
Richmax Air-Conditioning Co., Ltd.	萬聯空調有限公司	2698 3423	Distributor of HVAC Product
Sanby Trading Co., Ltd.	聖備貿易有限公司	2573 4219	Specializing in Trading Construction Insulation Material such as Phenolic Foam, Fibreglass
Savills Engineering Ltd.	第一太平戴維斯設備工程有限公司	2534 1688	Contracting & Energy Service
Shun Hing Ref. A/C Engineering Ltd.	順興雪櫃冷氣工程有限公司	2387 2882	Design, Supply & Installation of Air-Conditioning
Sing Kin Ltd.	陞建有限公司	2333 1518	Contracting
Stars (H.K.) A/C & R Co., Ltd.	恆星(香港)冷熱設備有限公司	6116 7832	Manufacturing
Southa Engineering Limited	南施工程有限公司	2963 7241	Air-Conditioning & Refrigeration Installation
Super Mark (H.K.) Engineering Co., Ltd.	高達(香港)工程有限公司	2595 1122	Supplier & Distributor for Electrostatic Precipitator, MVAC System & Electrical Installation
Teambase Development Ltd.	天基發展有限公司	2554 6263	Manufacturing & Airduct Fabrication
Thermtech Building Products	泛達建築材料有限公司	2756 3837	Contracting & Supplier for Weatherproof / Fire Resistant Materials to E & M Services
Tom's Equipment Co., Ltd.	義隆設備有限公司	2757 5539	Insulation Material Supplier
Union Manor Ltd.	聯明有限公司	2797 2168	Contracting
Viewco Building Services & Eng. Co., Ltd.	偉保工程有限公司	2543 0610	Contracting
Vital Engineering Co., Ltd.	威圖工程有限公司	2571 5382	Contracting
Wai Luen Air Conditioning Ltd.	偉聯空調設備有限公司	2890 9321	Contracting
Wardson Engineering Ltd.	華順工程有限公司	2329 8268	Contracting
Wolter Asia Ltd.	華德亞洲有限公司	2456 0198	Supply & Manufacturing of Full Range of Ventilation Fans
Wysermann Co., Ltd.	威士文有限公司	2614 2213	Supply & Manufacturing Air Conditioning Accessories
Yordland Engineering Ltd.	日島工程有限公司	2362 2186	Design, Supply & Installation and Maintenance of HVAC, Electrical and Fire Services System