

BillionGroup Technology Limited

Your Professional Energy Consultant



BillionGroup Technologies Ltd.



*“We shape **Energy** for a better World”*



BillionGroup Technologies Ltd.



- A Professional Energy Consultant in the Region since 1991
- Providing Energy Consultancy Services for energy-efficiency improvement for various industries including Government Departments, Manufacturing Plants and Facilities, Transportation Companies, Commercial Buildings, Residential Buildings, Hotels, Institutions, Universities, Schools and etc.



BillionGroup Technologies Ltd.

Two Business Objectives: -

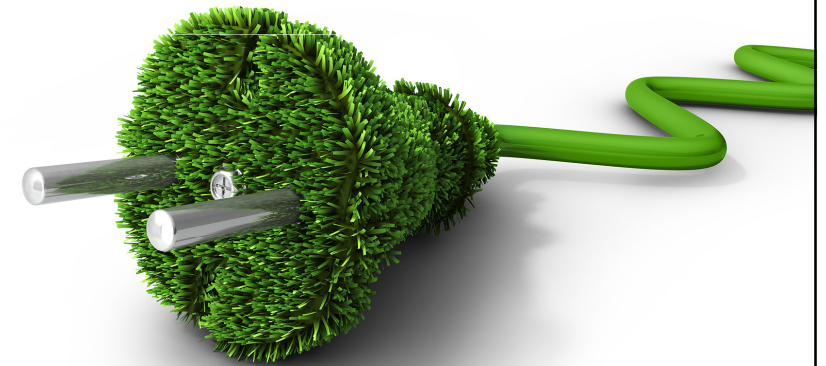
- **Professional Energy Consultant Services**
 - Energy-efficiency improvement for all energy consuming systems
 - Establishment of Energy Management System
 - Carbon Foot-print Evaluation and Calculation
 - Values Innovation for our clients in different industries based on the catalyst “Energy & Environmental Technology”
- **Energy-conservation Solutions and Products**
 - To develop fit-for-purposed energy-saving solutions and products
 - Exploration and Commercialisation of latest technology into energy-saving solutions and products



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Professional Energy Consultant Services

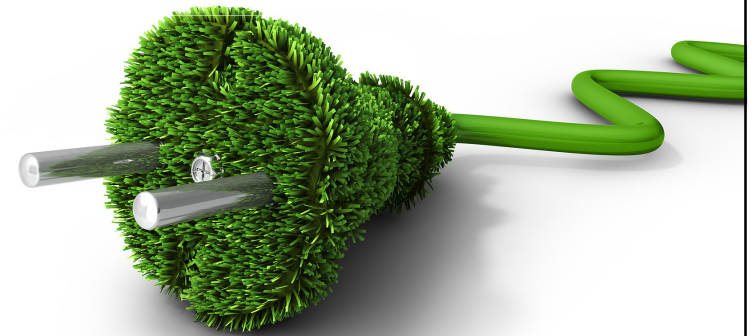
For governments, manufacturers and building owners to provide an extensive range of energy consultancy and implementation services for energy-efficiency improvement and pollution prevention in manufacturing systems, transportation systems, electrical systems, air-conditioning systems, lighting systems, water and waste systems.



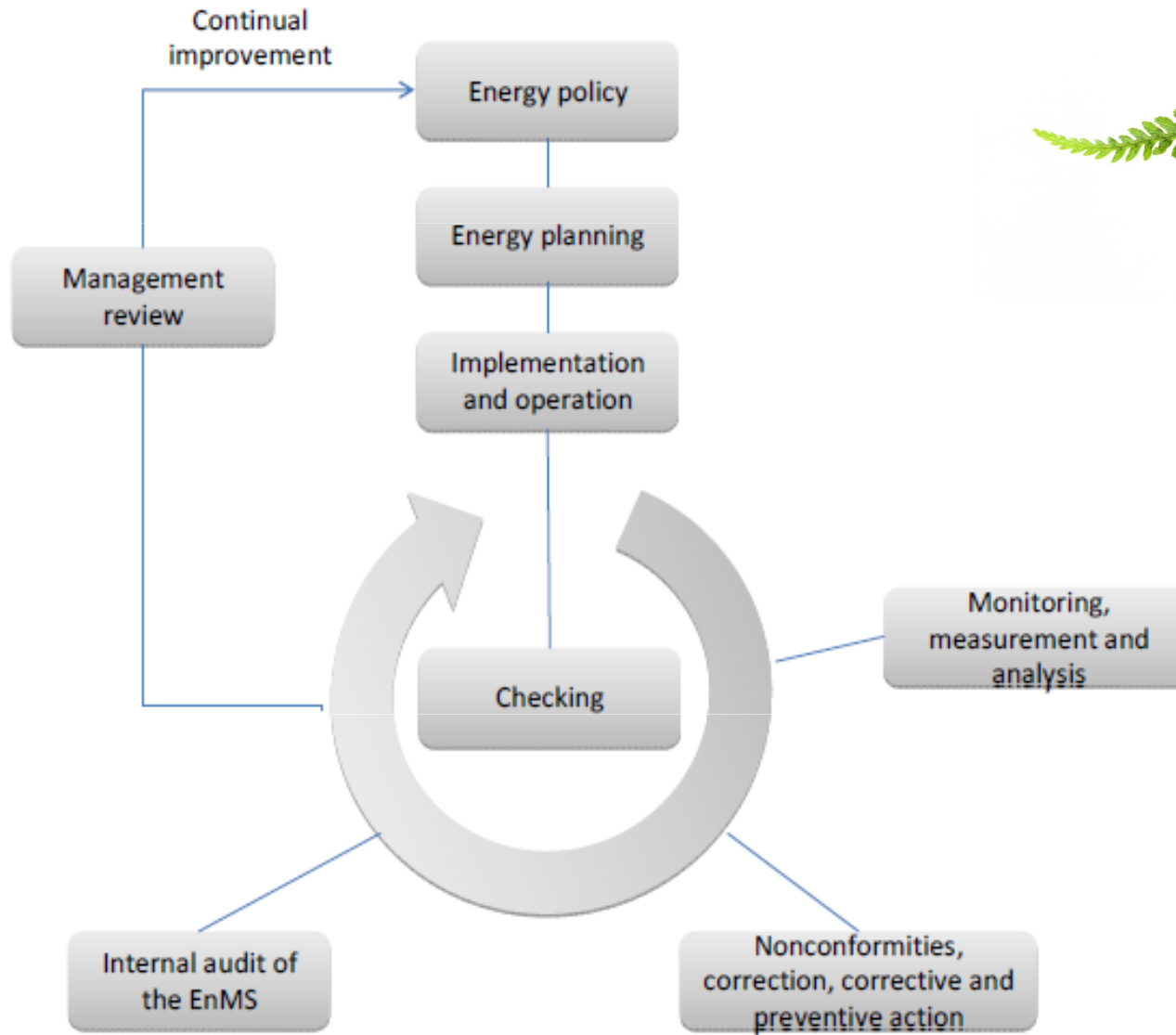
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Establishment of Energy Management System ISO-50001



ISO50001



Energy Management System Model for this International Standard



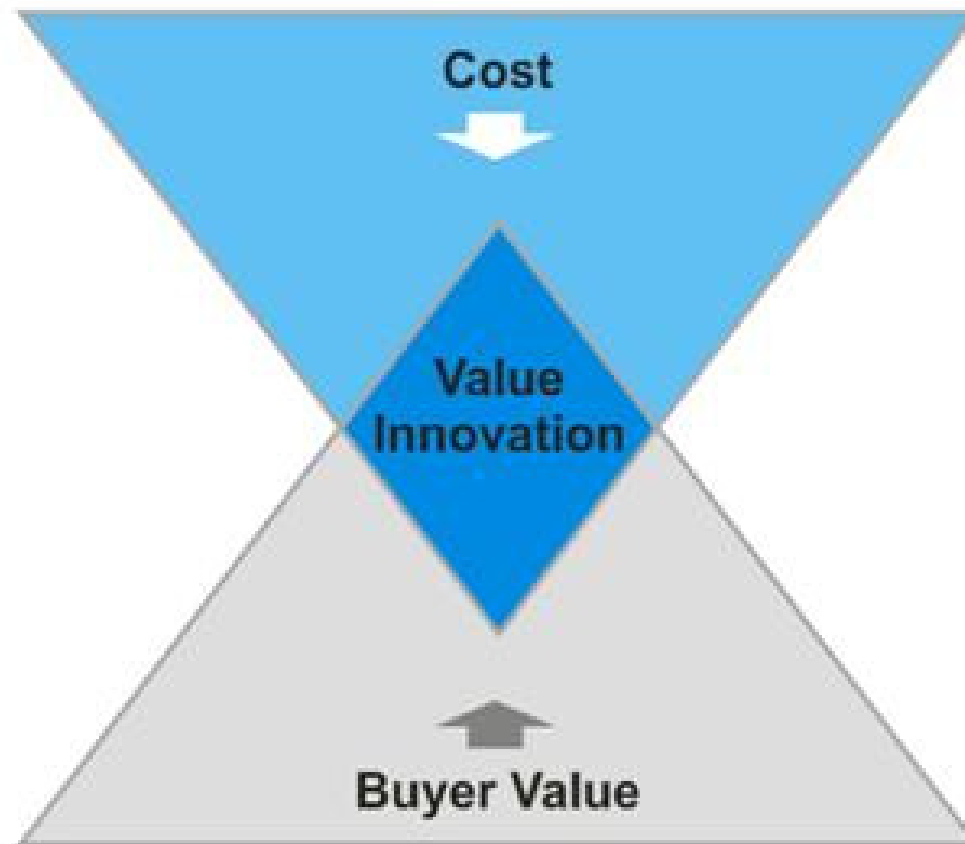
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Energy-conservation Solutions/Products



Lighting Products

1. BG E4Max T5 Tube

- Low Power Consumption ($\leq 18\text{W}$)
(Normal T5 tube is 28W)
- High Power Factor (≥ 0.95)
- Life Time: >20000hrs
- CRI: around 86
- Energy saving up to 50% of compact fluorescent lamp

Size : Dimension (32mm) x

Length (600mm, 900mm & 1200mm)

Built-in NAMI Reflector

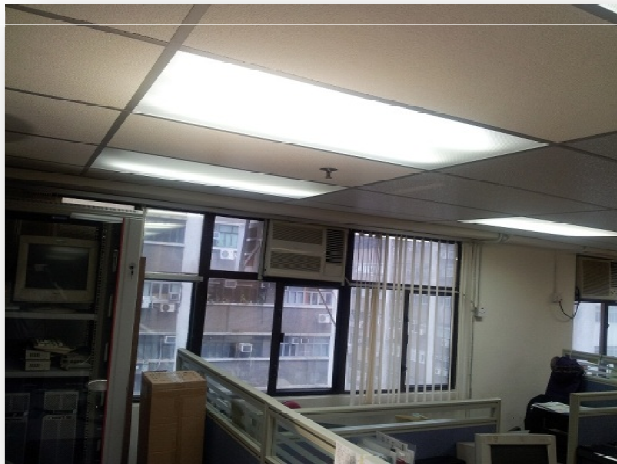
Low Harmonic Interference

Brightness: 395LUX



Lighting Products

1. BG E4Max T5 Tube



Lighting Products

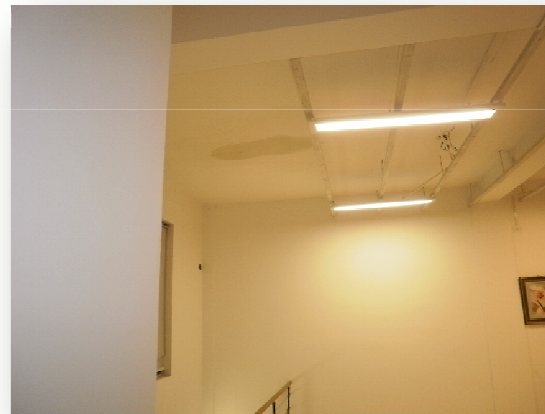
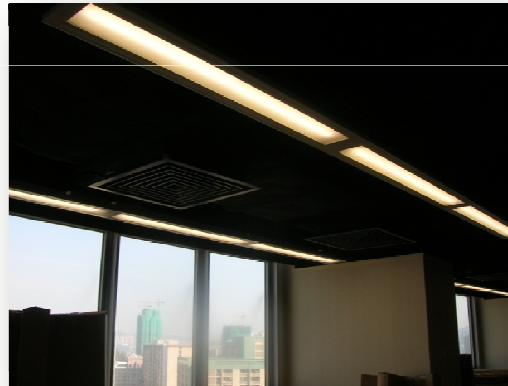
2. BG E4Max LED Lighting

- Long Life time
(Operation time: over 35000hours)
- No Mercury
(Environmental friendly)
- Low glare
- Constant Color Temperature (lower temperature)
- Energy saving up to 50% of compact fluorescent lamp
- Types: Downlight, LED Ceiling Panel, Bulkhead....



Lighting Products

2. BG E4Max LED Lighting



Lighting Products

3. LEP Lighting

- Light Emitting Plasma™ (LEP™)
- Energy-Efficient and Environmentally Clean Technology
(Saves over 50% in energy costs compared to traditional lighting)
- Full Color Spectrum (Brilliant white light)
- Dimmable and Solid State Control
- Pill Size bulb
- Higher Lumen Density (Lm/mm^2) than LED
(single source)
- Color Rendering (CRI) (73-95)
(Higher CRI, higher white performance)
- Material: Magnesium Alloy (Higher Cooling material)
- Type: Street Light, Flood Light, Display light..



Lighting Products

3. LEP Lighting



Air-Conditioning Product

“ECCO” Evaporative Chiller

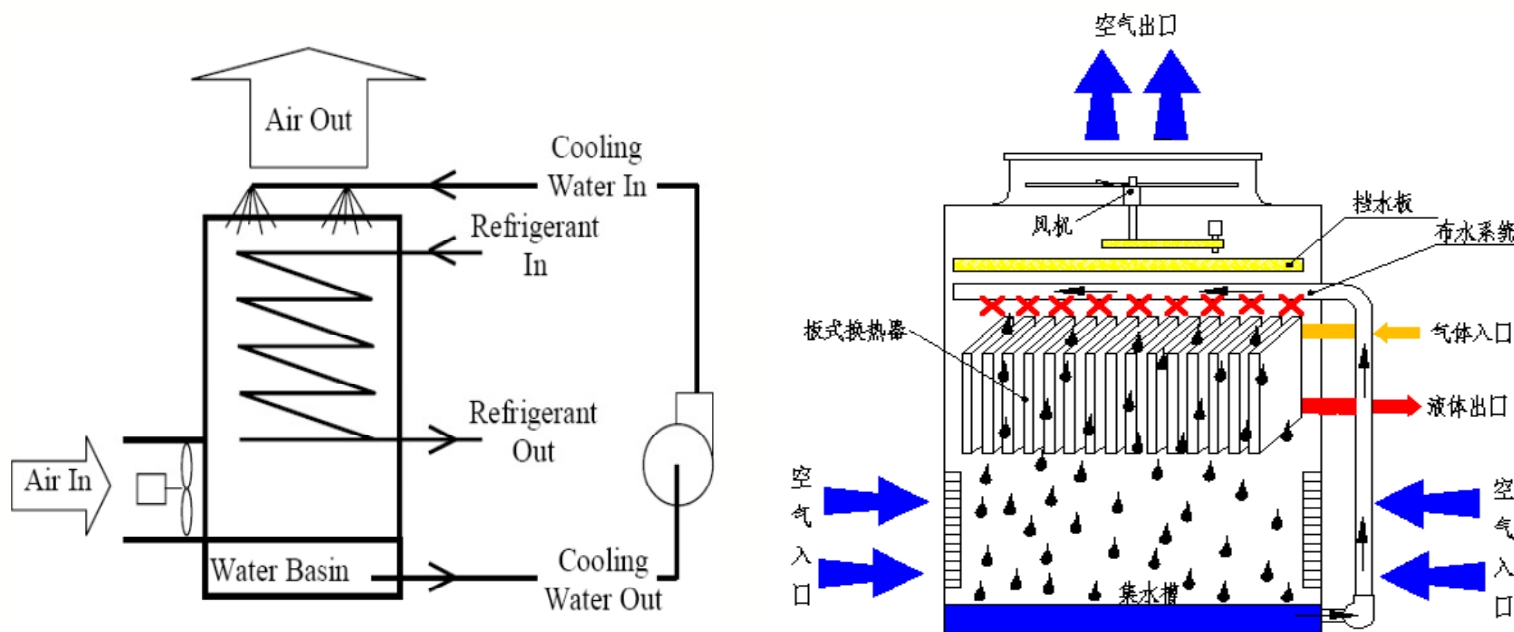
- Can save 35% energy consumption in comparison to conventional air-cooled chiller and 15% energy consumption in comparison to water-cooled chiller
- Tube Evaporator patent in China, Japan, USA, Hong Kong
- Higher COP rate (4.2-4.8)
- 3 Saves – Electricity, Water and land



Air-Conditioning Product

“ECCO” Evaporative Chiller

结构上将冷凝器和冷却塔**合二为一**，省略冷却水从冷凝器到冷却塔的传递阶段；充分利用水的蒸发潜热冷却工艺流体，用水量为水冷式冷凝器的**45~50%**。



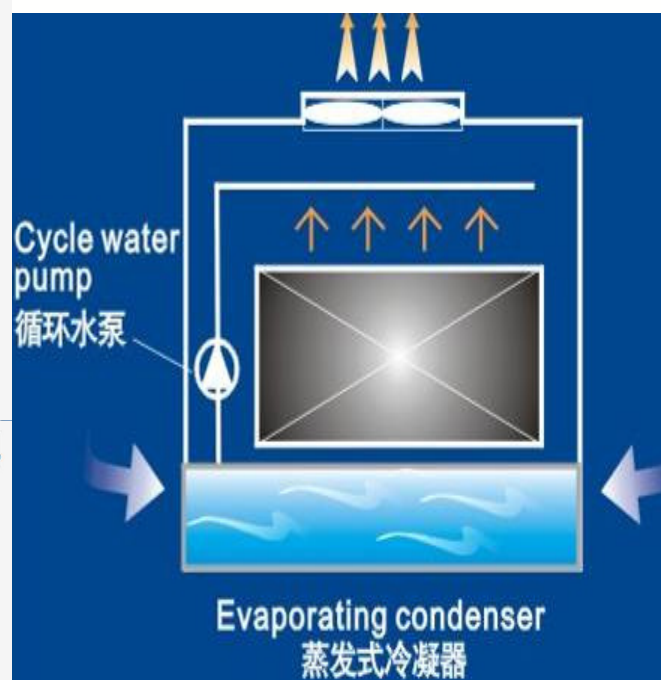
Air-Conditioning Product

“ECCO” Evaporative Chiller



蒸发式冷凝：效率最高的冷凝方式

- 冷凝热 → 蒸发式冷凝器（显热交换）→ 冷凝热传递给水膜 → 水膜蒸发（潜热交换）→ 冷却空气 → 小风量轴流风机 → 大气
- 单位KW冷量风机风量为110 ~ 125 m³/h, 相当于风冷冷凝所需风量的1/4
- 每100KW冷量循环水量为10 ~ 12 m³/h, 相当于水冷冷凝所需循环水量的1/2
- 冷却水泵扬程：5 m, 相当于水冷冷凝水泵扬程的1/4
- 冷凝温度：38℃ 以下
- 单位KW冷量能耗 = 0.006（冷却泵耗能） + 0.008（冷却风机耗能） = 0.014 KW

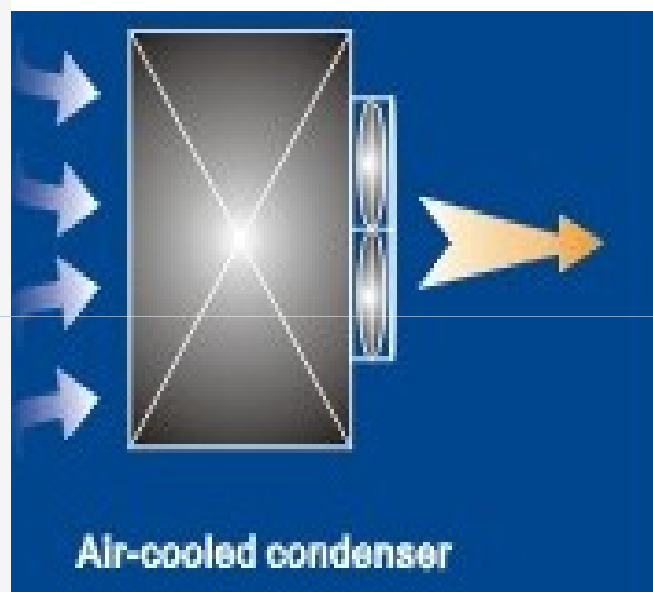


Air-Conditioning Product

Other Chillers

风冷式冷凝

- 空气 → 风冷冷凝器（显热交换） → 带走冷凝热，空气温度升高 → 大风量轴流风机 → 大气
- 单位KW冷量风机风量为420 ~ 500 m³/h
- 冷凝温度：45℃以上
- 单位KW冷量风机耗能 = 0.026 KW



Air-Conditioning Product

“ECCO” Evaporative Chiller

冷凝方式	风冷式	水冷式	蒸发式
冷凝温度	45℃	40℃	38℃
单位冷量 风机风量	420- 500m ³ /h	120-200m ³ /h	100-160m ³ /h
冷却水泵 能耗	--	视楼层而定， 最少扬程需20米	3-5米扬程即可
单位冷 量冷凝能耗	0.026KW	0.038KW	0.014KW
系统COP	2.5-3.2	3.2-3.8	4.2-4.8
蒸发式冷凝 对比节能	35%	15-20%	--



Air-Conditioning Product

Job Ref. of “ECCO” Evaporative Chiller

香港九龍觀塘萃華餐廳	板管蒸发式冷凝模块冷水机组	1套
香港九龍灣啟業村社區會堂	板管蒸发式冷凝屋顶空调机组	2套
香港荃灣政府合署空调节能改造工程	板管蒸发式冷凝模块冷水机组	8套
香港大埔工業村（香港聯合利華有限公司）	板管蒸发式冷凝螺杆冷水机组	3套
香港大窩口體育館（特區政府項目）	板管蒸发式冷凝螺杆冷水机组	2套
香港特區元朗政府合署空调节能改造项目	板管蒸发式冷凝螺杆冷水机组	2台
香港特區政府富亨村社區中心空调节能改造项目	板管蒸发式冷凝螺杆冷水机组	2台
香港龍翔道水務署機電工場	板管蒸发式冷凝螺杆冷水机组	2台
香港律敦治醫院空調工程	蒸发式冷凝模块冷水机组	2套
香港法國醫院	蒸发式冷凝螺杆冷水机组	2套

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Heat Insulation Product

1. BG “SolarCool” Thermal Window Film

- Substantial A/C energy reduction
- 99% UV Blocking
- 81% Infra-red light Blocking
- Explosion-proof: Increase safety
- Reduce A/C temp. → Increase energy efficiency
- Different Colors
- 10 Years warranty



Heat Isolation Product

2. BG “SolarCool” Thermal Coating

- Unparalleled high-performance of sunshine-proof and insulation
- Create healthy, comfortable, natural internal environment of the building
- Low cost; Unexpectedly well result
- Possible benefits and feedbacks from the huge energy-saving
- Pollution-free environment & Water-Based paint coating
- Unique effects on building and facilities protection



Renewable Energy Product

1. Solar Power

- Unlimited & renewable: solar energy on earth is all sources of the world exposure. Each year, the energy of solar power transmitted is equivalent to 130 trillion tons of coal produced by quasi-heat, about 1 million times of the world's annual energy consumption.
- Stable and Durable: Our component products include warranty of 25 years, we commit to maintain efficiency more than 90% within 10 years and remain at more than 83% within 20 years. A one-off investment can gain a long-term return.



Renewable Energy Product

2. Others

- a. Solar Hot Water Heaters
- b. Wind generator (Horizontal/Vertical)

.....



Others

Intelligent Capacitor Bank for localized reactive power compensation.....



Others

Waste Heat Recovery System,
Waste Water Recovery System....



Job Reference



Job reference

Company Name / Country

A-Fontane Company Limited, Hong Kong, China

ATS Automation Asia Pte Ltd., Hong Kong

Bank of America, Singapore

Bosch, Worldwide

Bosch Automotive Products (Suzhou) Co. Ltd, China

C&G Environment Technology Ltd.

Che Luen Electrical Engg. Co. Ltd, Hong Kong

Chemtech Electroplating Chemicals Ltd., Hong Kong

Chengdu Aircraft Manufacturing Plant, China

Cheung Kong (Holdings) Ltd., Hong Kong

China Steel Corporation, Taiwan

Chinese University, Hong Kong

Citybase Property, Hong Kong

Countcash Ltd., Hong Kong & China

Corum Knitting Factory



Job reference

Company Name / Country

Diamond Hill Baptist Church, Hong Kong

D. Heung & Associates, Hong Kong

Drainage Services Department, HKSAR

Dongguan Sizhing Electronic Co.,Ltd., China

Dongguan Superior Manufacturing Tech. Co. Ltd., China

E Tat Factory Building, Hong Kong

Edeex Enterprises Co. Ltd., Taiwan

Electrical and Mechanical Services Department, HKSAR

Emerson Process Management, Singapore

Eternal Unity Holdings, China

Evergo International Holdings, Hong Kong

Faram Development, Hong Kong

Fenwick Pier

Fullic Enterprises, Hong Kong

Gainteam Trading Co. Ltd., China



Job reference

Company Name / Country

G.E.W. Corporation Limited, Hong Kong & China

Glory Field Co. Ltd., Hong Kong

Gongin Precision Industrial Co., Taiwan

HACTL, Hong Kong

Hang Fung Gold Technology Group, Hong Kong & China

Hang Seng Bank, Hong Kong

Hang Yick Properties Management Ltd., Hong Kong

Hantec Investment, Hong Kong & Macau

Highways Department, HKSAR

HK Chinese Christian Churches Union, Hong Kong

Hoi Sing Construction, Hong Kong

Honeywell Ltd., Hong Kong

Hong Kong Broadband Network Ltd., Hong Kong

Hong Kong Commercial Bank, Hong Kong

Hong Kong Electronics Industries Association, Hong Kong



Job reference

Company Name / Country

Hong Kong Ferry (Holdings) Co., Ltd.

Hong Kong General Chamber of Commerce, Hong Kong

Hong Kong Jockey Club, Hong Kong

Hong Kong Land, Hong Kong

HSBC, Hong Kong

Hutchison Global Communications Ltd., Hong Kong

Hutchison Whampoa, Hong Kong

Hutchison Global Crossing, Hong Kong

IFC Management Co. Ltd., Hong Kong

ING Barings, Hong Kong

JaneClare Ltd., Hong Kong

JMI Industrial Manufacturing Ltd., Hong Kong & China

Johnson Controls Hong Kong Ltd., Hong Kong

Jurong Town Corporation, Singapore

Kadoorie Farm and Botanic Garden, Hong Kong



Job reference

Company Name / Country

Kalex Printed Circuit Board Limited, Hong Kong

Kamfaith Group, Hong Kong

Kingdom Fine Metal Ltd. ,China

Kodak (S) Pte Ltd, Singapore

Kowloon Canton Railway Corp., Hong Kong

Kowloon Hotel, Hong Kong

Kowloon True Light Secondary School, Hong Kong

Kowloon True Primary School, Hong Kong

Law's Properties, Hong Kong

Lear Corporation, Philippines

Lee & Man Paper Manufacturing Ltd., Hong Kong

Leo Paper Group, Hong Kong & China

LiHeng Metal and Plastic Product (Suzhou),China

Mak Hang Kei (HK) Construction Ltd., Hong Kong



Job reference

Company Name / Country

Mandatory Provident Fund Authority, HKSAR

Marco Polo Hotel Group, Hong Kong

Marconi GEC, Hong Kong
Motorola Semiconductors Hong Kong Ltd., Hong Kong

MRC Technology Ltd., Hong Kong

Multiple Zones India Private Limited, India

Munsang College, Hong Kong

Nga Kit Laundry, Hong Kong

ODL Information Services Sdn Bhd, Malaysia

Ontrack New Zealand Railways Corporation, New Zealand

Oscar Restaurant, Hong Kong

Paka Preschool Products Ltd., Hong Kong, China

Peak Plastic & Metal Products (International), USA & China

Pharos Industrial Ltd., Hong Kong & China

Pokin Engineering & Supplies Co., Hong Kong



Job reference

Company Name / Country

G.E.W. Corporation Limited, Hong Kong & China

Glory Field Co. Ltd., Hong Kong

Gongin Precision Industrial Co., Taiwan

HACTL, Hong Kong

Hang Fung Gold Technology Group, Hong Kong & China

Hang Seng Bank, Hong Kong

Hang Yick Properties Management Ltd., Hong Kong

Hantec Investment, Hong Kong & Macau

Highways Department, HKSAR

HK Chinese Christian Churches Union, Hong Kong

Hoi Sing Construction, Hong Kong

Honeywell Ltd., Hong Kong

Hong Kong Broadband Network Ltd., Hong Kong

Hong Kong Commercial Bank, Hong Kong

Hong Kong Electronics Industries Association, Hong Kong



Job reference

Company Name / Country

Polytec Group, Hong Kong

Protex Systems Holdings Ltd., Hong Kong

Pui Ching Primary School, Hong Kong

Regal Airport Hotel, Hong Kong

Ronald Lu & Partners (HK) Ltd., Hong Kong

SCS Networks Pte Ltd, Singapore

Shandong Euro-America Home Textile, China

Shanwei Paka & Household Products Ltd., Hong Kong & China

Sheraton Hotel, Hong Kong

Shun Hing Engineering Contracting Co. Ltd., Hong Kong

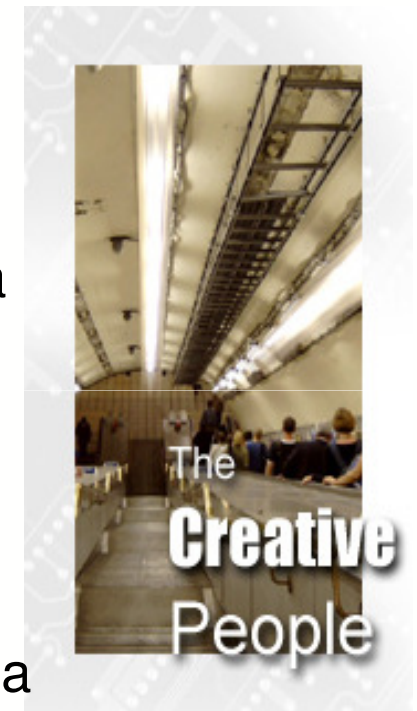
Silver Sight Property, Hong Kong

Sino Estate Management Ltd., Hong Kong

Sizhing Electronic (Suzhou) Co. Ltd., China

SMT Surface Mount Technology (Holdings), Hong Kong & China

Solectron Manufacturing Group, Worldwide



Job reference

Company Name / Country

Steve Leung Architects Ltd., Hong Kong

Sun Hung Kai Properties Ltd., Hong Kong

Surface Mount Technology (Changchun), China

Surface Mount Technology (Tianjin) Co. Ltd., China

Swire Coca-Cola HK Ltd., Hong Kong Tai Woo Engineering Ltd., Hong Kong

Texwood Limited, Hong Kong

The Chinese Rhenish Church, Hong Kong

Tsung Tsin Primary School, Hong Kong

Tung Hing Computer Systems Ltd., Hong Kong

UDL Kenworth, Hong Kong

UNIONPAC Ltd., Hong Kong

United Automotive Electronic Systems Co. Ltd., China

Univac Precision Engineering Pte Ltd., Singapore



Job reference

Company Name / Country

Varicraft Manufactory Ltd.

Vertigo Hong Kong Ltd., Hong Kong

Vitanic Industrial Co. Ltd., Hong Kong

Vitasoy International Holdings Ltd., Hong Kong

Wealrise Investment Ltd., Hong Kong

Westwood Associates, ChinaWincome, Hong Kong

Wing Keung Ltd., Hong Kong

Works Bureau, Hong Kong

Worldfield Co. Ltd., Hong Kong

Wong's Electronics Co. Ltd., Hong Kong

Wong's Electronics Co., Ltd., Vietnam

Wong's Welco Technology (Shenzhen), China

Wong's Welco Technology (Suzhou) Ltd., China

Xiamen Lota International Co. Ltd., China





Thank You

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