

critical m&e engineering sdn bhd
(946363-w)

critical sales & services sdn bhd
(1079183-x)



data center



cleanroom &
process utilities



acmv &
plant room mep



service &
maintenance

introduction

The company was established in 2011, the objective then was to fulfil the engineering needs of growing buildings and manufacturing industries, especially the Multinational Corporation (MNC).

Our services cover Mechanical, Electrical & Process (MEP)'s

- **AIR CONDITIONING & MECHANICAL VENTILATION (ACMV) & PLANT ROOM MEP**
- **CLEANROOM & PROCESS UTILITIES**
- **DATA CENTER**
- **SERVICES & MAINTENANCES**

Today, the company is an unique Engineering Services firm that offers unsurpassed critical facility support, with the extensive experience in

- **CONSULTANCY & AUDIT**
- **DESIGN & BUILD**
- **ENGINEERING & CONSTRUCTION**
- **SERVICES & MAINTENANCES**

The company approach to each project is '**LISTEN, UNDERSTAND, HANDS ON, DELIVER**', where we tailor our efforts to the specific needs of the client.

The company as an engineering firm incorporated in Malaysia, is registered with **Construction Industry Development Board Malaysia (CIDB)**, as **Grade G7 & G5**, which shall allow the company to participate to a more sizable project, which is in the company forecasted pipeline.

As an **ISO9001:2015** certified company, we commit to zero compromises to quality management system (**QMS**), in ensuring meeting customers and other stakeholder needs within statutory and regulatory requirements related to a product or service.



Vision

To be the leader in the critical facility industry.

Mission

A people oriented organization, team-up and share the common values, to provide unsurpassed solutions and supports, to meet customer needs and expectations, with ZERO compromise to human safety.

group of companies



registration – professional registration



registration – professional membership



registration**Name of Company** Critical M&E Engineering Sdn. Bhd.

Company Registration No. 946363-w

Paid Up Capital RM1,000,000.00

Banker Public Bank Berhad, Jalan Cantonment, Pulau Tikus Branch, Penang.

Company Secretary Lim Yong Chiat (MAICSA 7060553), 1772-B, Lorong Tiong, 05200 Alor Setar, Kedah.

Name of Company Critical Sales & Services Sdn. Bhd.

Company Registration No. 1079183-x

Paid Up Capital RM300,000.00

Banker Malayan Banking Berhad, Bayan Lepas Branch, Penang.

Company Secretary Lim Yong Chiat (MAICSA 7060553), 1772-B, Lorong Tiong, 05200 Alor Setar, Kedah.

correspondence**Business Address** Penang, Malaysia

4,6,8 Cangkat Bukit Belah

11920 Bayan Lepas, Penang

Telephone No. 604 – 649 6033

Fax No. 604 – 649 3033

Business Address KL, Malaysia

RK30A, Jalan Villa 3, Anggerik Villa, Off Jalan Semenyih

43500 Kajang, Selangor D.E.

Telephone No. 603 – 8723 2033

Fax No. 603 – 8724 2033

Email admin@critical-eng.com

Penang, Malaysia

17, Lorong Valdor Jaya 3, Golden Gateway Perindustrian Valdor

14200 Sungai Jawi, Penang, Malaysia

Ho Chi Minh, Vietnam

Vincom Center Tower, 72 Le Thanh Ton, 17th Floor, Unit 11, Ben Nghe Ward, District 1,

Ho Chi Minh City, Vietnam



PERAKUAN PENDAFTARAN

Adalah dengan ini diperakui bahawa kontraktor yang dinyatakan di bawah ini telah berdaftar dengan Lembaga mengikut Bahagian VI Akta Lembaga Pembangunan Industri Pembinaan Malaysia 1994. Pendaftaran ini adalah tertakluk kepada syarat-syarat yang telah ditetapkan bersama perakuan ini.

No. Pendaftaran : 0120140218-PP155237
Nama Kontraktor : CRITICAL M&E ENGINEERING SDN. BHD.
Alamat Berdaftar : 6 & 8 CHANGKAT BUKIT BELAH
 11920 BAYAN BARU
 PULAU PINANG
Daerah : BARAT DAYA
Tarikh Mula Berdaftar : 18/02/2014

<u>GRED</u>	<u>KATEGORI</u>	<u>PENGKHUSUSAN</u>
G7	B	B04
G7	CE	CE21
G7	ME	M01 M02 M15 M18

Tarikh Mula Berkuatkuasa : 30/04/2020
Tarikh Habis Tempoh Perakuan : 06/06/2023

STATUS: AKTIF



Ketua Eksekutif
 Lembaga Pembangunan Industri Pembinaan Malaysia
 Tarikh: 30/04/2020



PERAKUAN PENDAFTARAN

Adalah dengan ini diperakui bahawa kontraktor yang dinyatakan di bawah ini telah berdaftar dengan Lembaga mengikut Bahagian VI Akta Lembaga Pembangunan Industri Pembinaan Malaysia 1994. Pendaftaran ini adalah tertakluk kepada syarat-syarat yang telah ditetapkan bersama perakuan ini.

No. Pendaftaran : 0120190704-PP028894
Nama Kontraktor : CRITICAL SALES & SERVICES SDN. BHD.
Alamat Berdaftar : 6 & 8 CHANGKAT BUKIT BELAH
 11920 BAYAN LEPAS
 PULAU PINANG
Daerah : BARAT DAYA
Tarikh Mula Berdaftar : 05/07/2019

<u>GRED</u>	<u>KATEGORI</u>	<u>PENGKHUSUSAN</u>
G5	B	B04
G5	CE	CE21
G5	ME	M15

Tarikh Mula Berkuatkuasa : 05/07/2019
Tarikh Habis Tempoh Perakuan : 07/07/2021

STATUS: BARU



Ketua Eksekutif
 Lembaga Pembangunan Industri Pembinaan Malaysia
 Tarikh: 05/07/2019





KEMENTERIAN KEWANGAN MALAYSIA

SIJIL AKUAN PENDAFTARAN SYARIKAT

NO. SIJIL : K1013303552232191
 NO. RUJUKAN PENDAFTARAN : 357-0002310099
 TEMPOH SAH LAKU : 16/08/2019 - 15/08/2022

Behawa dengan ini diperakui syarikat :

CRITICAL SALES & SERVICES SDN BHD (1079183-X)

6 & 8

CANGKAT BUKIT BELAH

BARAT DAYA

11920 BAYAN LEPAS

PULAU PINANG, MALAYSIA

Telah berdaftar dengan Kementerian Kewangan Malaysia dalam bidang bekalan/perkhidmatan di bawah sektor, bidang dan sub-bidang seperti di Lampiran A. Kelulusan ini adalah tertakluk kepada syarat-syarat seperti yang dinyatakan di Lampiran B. Individu yang diberi kuasa oleh syarikat bagi urusan perolehan Kerajaan adalah seperti berikut :

CHOW CHIN SEANG	750625075719	DIRECTOR
TAN SI LIM	771016075775	DIRECTOR
HIEW YIN LIN	721012055157	MANAGER

t.t

DATO' ZAMZURI BIN ABDUL AZIZ

Perbendaharaan Malaysia Semenanjung

b.p. Ketua Setiausaha Perbendaharaan

Kementerian Kewangan Malaysia

Tarikh Berdaftar Dengan Kementerian Kewangan Malaysia : 16/08/2019

(Sijil ini adalah cetakan komputer dan tidak memerlukan tandatangan)

CERTIFICATE



This is to certify that

Critical M&E Engineering Sdn. Bhd.

6 & 8, Cangkat Bukit Belah, 11920 Bayan Lepas, Penang, Malaysia.

Quality Management System has been assessed and registered as conforming with the requirements of the ISO 9001:2015.

Scope:

Provision of Industrial & Commercial Air Conditioning Installation and Maintenance Engineering Services

Certificate Registration No. 000847-1-MY-1-QMS

Certified Since 24.12.2019

Valid from 24.12.2019

Valid until 23.12.2022



Managing Director

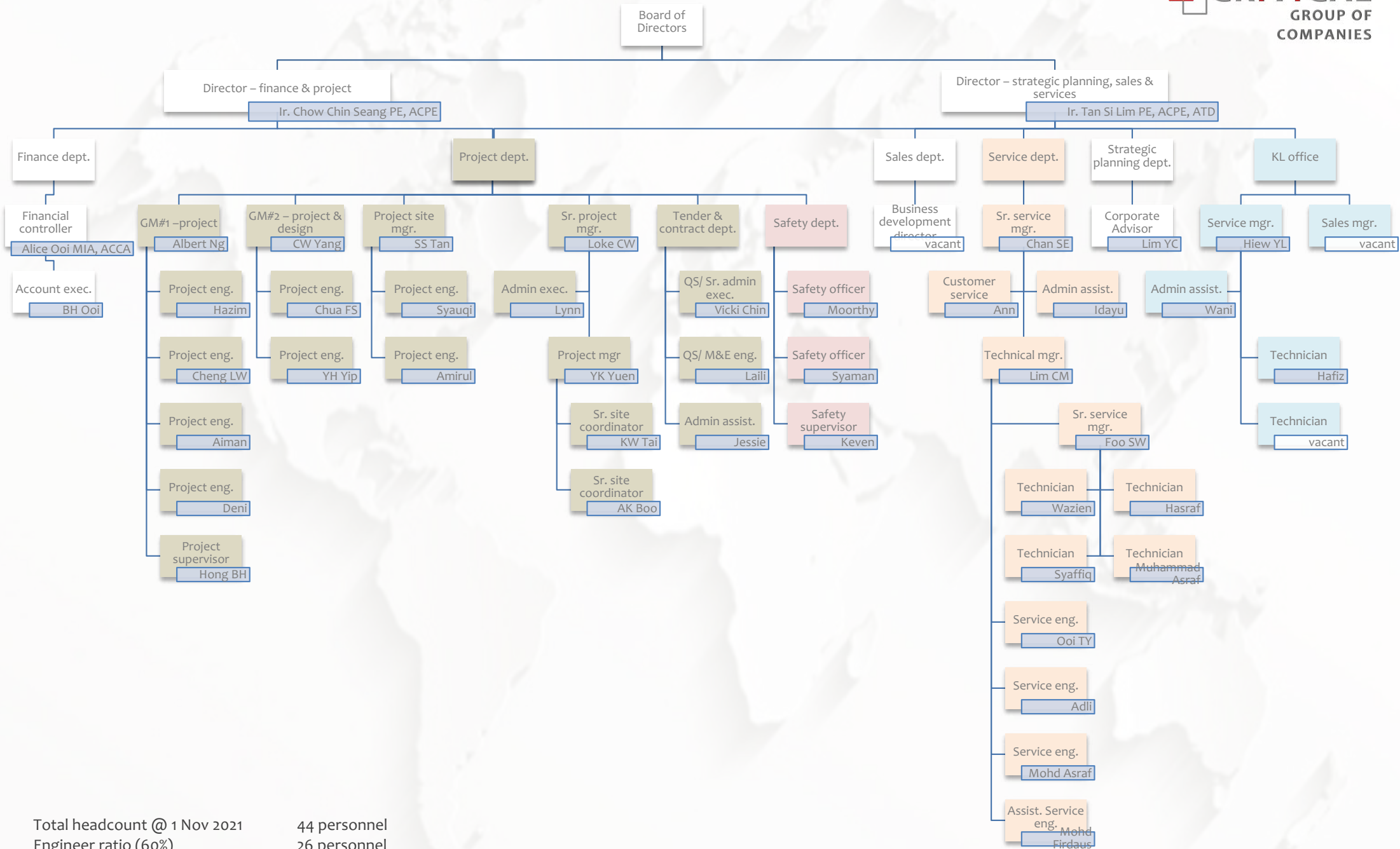


Business Systems Certification Pty, Ltd. (BCert) P.O. Box 75, St Marys NSW 1790, Australia

Certification is subject to satisfactory ongoing Surveillance Assessments.

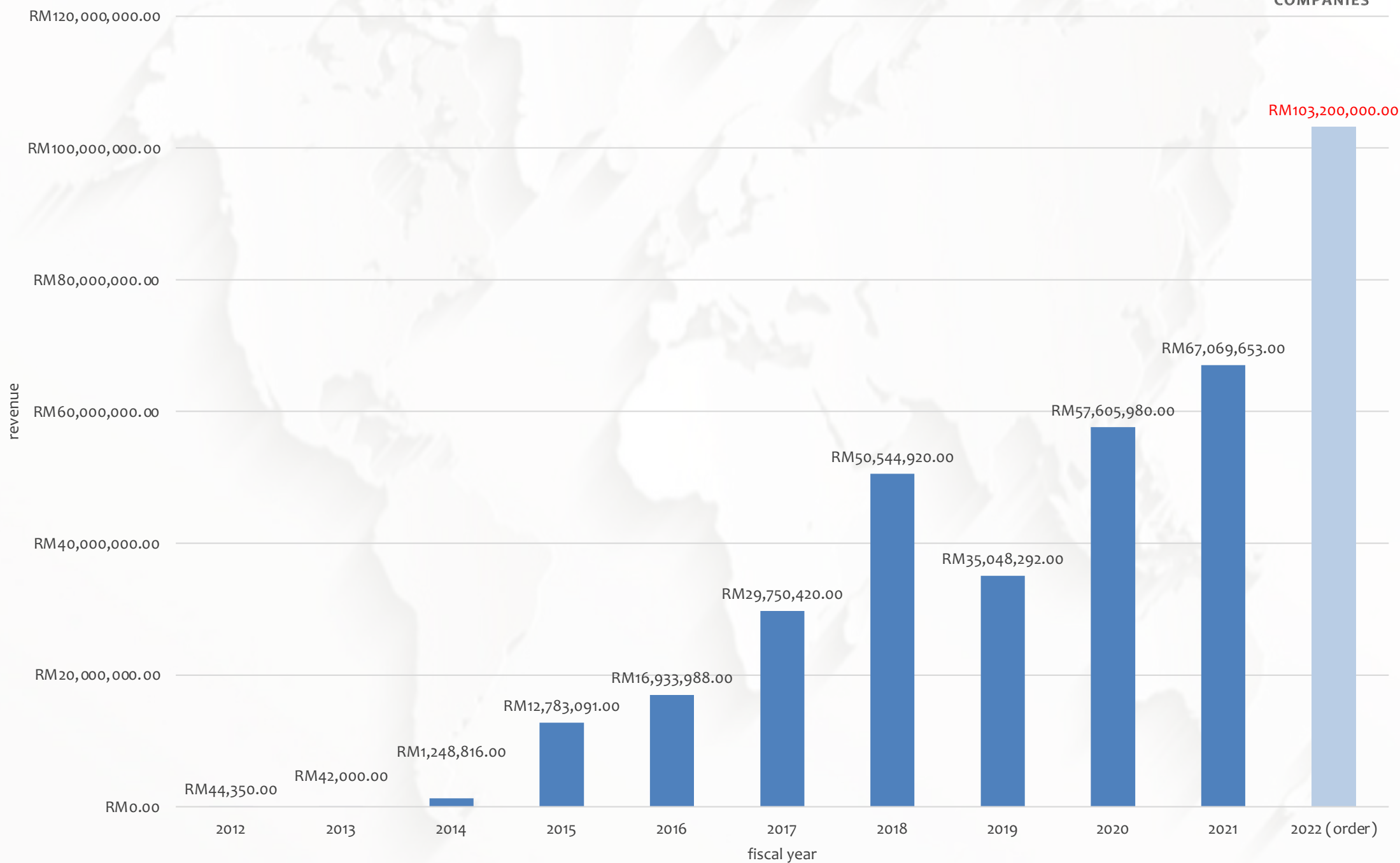
The validity of this certificate can be verified at www.jas-anz.org/register

Issue No.1 Date: 24.12.2019



Total headcount @ 1 Nov 2021
 Engineer ratio (60%)
 Project lead (mgr, gm, director)

44 personnel
 26 personnel
 8 personnel



2011

- CMEE Penang & KL office established
- CSS Penang & KL office established

2016

- Single order >5.5MW UPS/FC delivered & installed

2018

- FY >RM50mil revenue milestone

2021

- Accumulated >500,000ft² cleanroom constructed & handover
- Single order >20,000ft² TIER III data center MEP design & build
- Single order >150 nos CRAC delivered & installed
- Vietnam rep office established
- Appointed 'SOLE DISTRIBUTORSHIP' for DB AIRE CRAC in MALAYSIA

2022

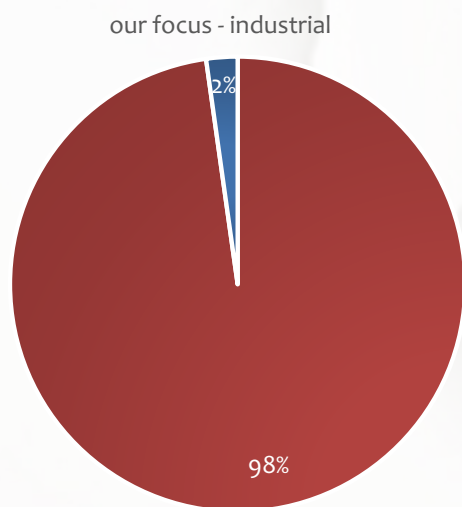
- FY >RM100mil revenue milestone to achieve
- and more...

2014

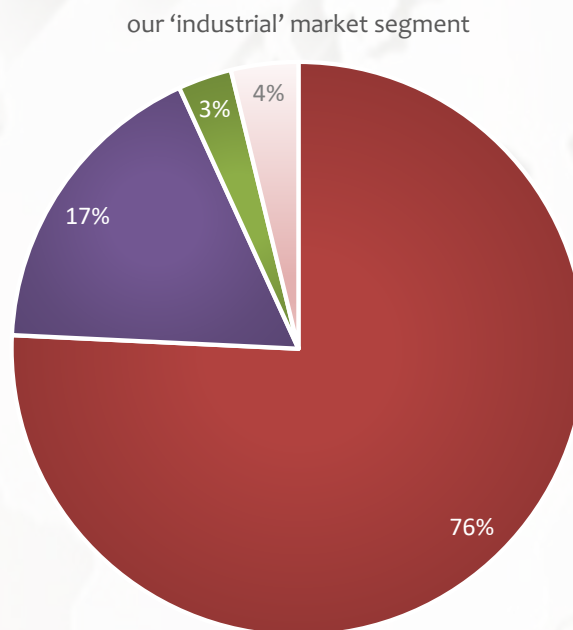
- CIDB G7 registered (CMEE)

2019

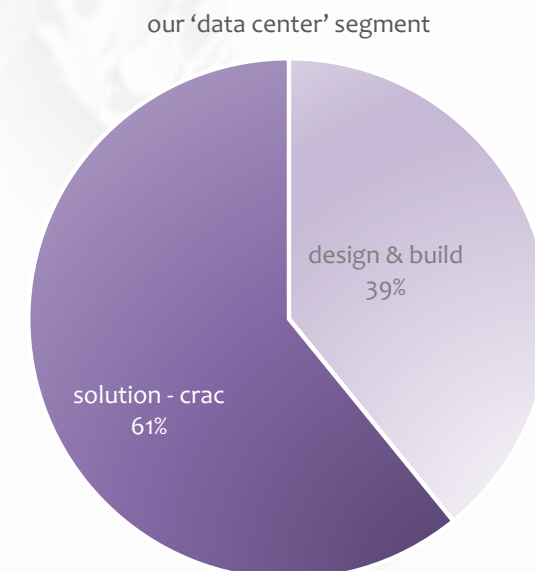
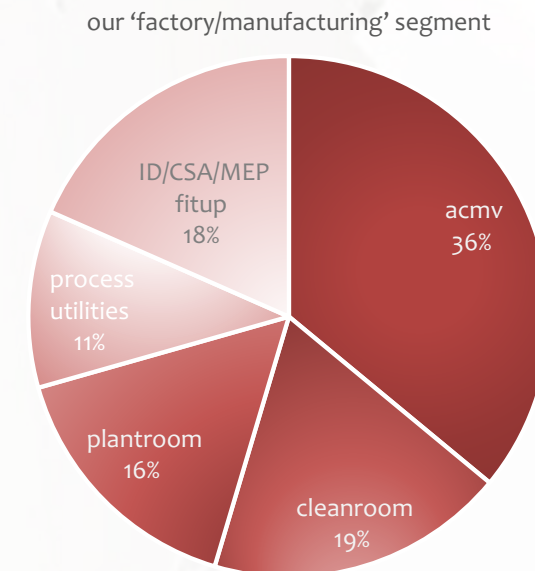
- CIDB G5 registered (CSS)
- MOF Registered
- ISO9001:2015 certified



■ industrial ■ commerical



■ factory/ manufacturing ■ data center ■ hospital/ healthcare ■ other





our services

Successful data center design build construction projects require a balance that can only be maintained through a deep understanding of every element, process and requirement of your data center infrastructure.

we listen to your data center requirements, to produce a quality, constructible design that will help you achieve your business goals.

There's no such thing as a "one-size-fits-all" solution

- Before one piece of equipment is selected,
- Before any topology is chosen,
- Before the floor plan is envisioned,

12 - SERVICE & MAINTENANCE

- PREVENTIVE/COMPREHENSIVE
- SPARE PARTS
- RECORDS KEEPING
- 24X7X365

1 - POWER AVAILABILITY

- UPS
- GENSET

2 - POWER PROTECTION

- UPS
- EARTHING

3 - BATTERY PROTECTION

- BATTERY MONITORING SYSTEM

4 - POWER DISTRIBUTION

- PDU
- PLC

5 - HEAT REMOVAL

- CRAC
- CRAH
- MV

6 - AIR DISTRIBUTION

- HOT/COLD AISLE CONTAINMENT
- PERFORATED RAISED FLOORING

8 - FIRE SUPPRESSION

- FM200

7 - WATER PROTECTION

- LEAK DETECTION SYSTEM

11 - REMOTE MONITORING

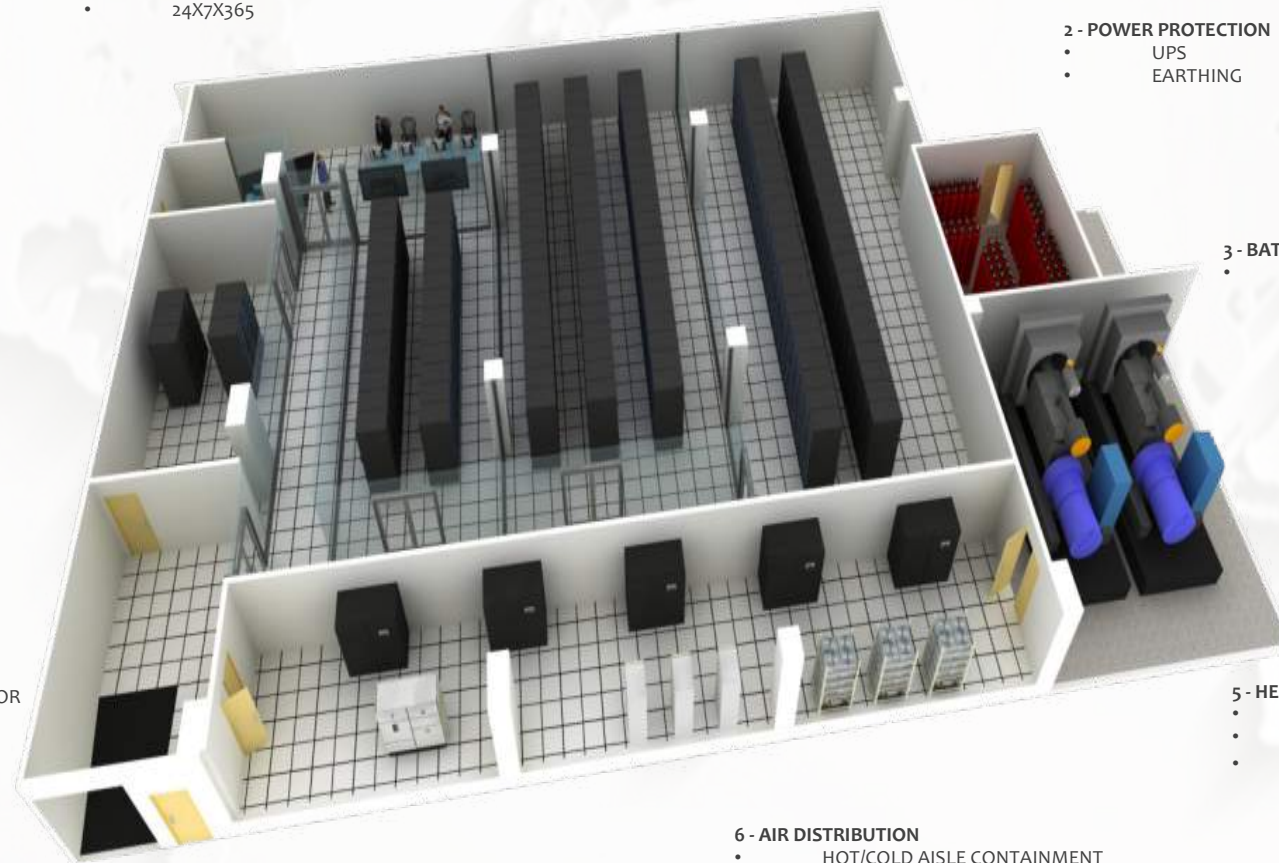
- WEB BASED SOFTWARE
- EVENT TRENDING
- REMOTE ON/OFF
- SMS/EMAIL
- ALARM ALERTING
- DCIM

10 - SECURITY

- CARD ACCESS
- BIOMETRIC
- CCTV

9 - FIRE DETECTION

- VESDA
- SMOKE/HEAT DETECTOR



US FED-STD-209E was a United States federal standard. It was officially cancelled by the General Services Administration on November 29, 2001, but is still widely used.

Class	Maximum Particles/ft ³					ISO Equivalent
	=> 0.1um	=> 0.2um	=> 0.3um	=> 0.5um	=> 5um	
1	35	7.5	3	1	0.007	ISO3
10	350	75	30	10	0.07	ISO4
100	3,500	750	300	100	0.7	ISO5
1,000	35,000	7,500	3,000	1,000	7	ISO6
10,000	350,000	75,000	30,000	10,000	70	ISO7
100,000	3,500,000	750,000	300,000	100,000	830	ISO8

Efficient and reliable utility systems are a critical requirement for the successful operation of your process facility. Utilizing the appropriate technology to meet the necessary regulatory requirements, we develop solutions that are "right sized" to your application.

We are experts in the design, testing and troubleshooting of utility systems for manufacturing facilities, including:

- Compressed Dry Air (CDA)/ Oil Free Air (OFA)
- High Purity Gas Piping
 - Nitrogen Gas (N₂)
 - Oxygen Gas (O₂)
 - Helium Gas (He)
 - Argon Gas (Ar)
- Liquid Petroleum Gas (LPG)
- Process Cooling Water (PCW)
- Hot Water Piping
- Steam Piping
- RO/DI
- Waste Water Piping
- Helium Exhaust
- General Exhaust
- Acid Scrubber

end client	industry	description	year	month	standard	class	area (ft2)
Wen Sen Heng Sdn Bhd (Rembina)	pharmaceutical	new factory project c/w ACMV, cleanroom, process utilities	2015	apr	ISO, cGMP	ISO8	14,000
Osram Opto Semiconductor (m) Sdn Bhd	semicon	PEN5 level 4 class 100k cleanroom expansion	2016	mar	ISO	ISO8	8,000
Osram Opto Semiconductor (m) Sdn Bhd	semicon	PEN3 class 100k cleanroom expansion	2016	oct	ISO	ISO8	6,000
Hacks (M) Sdn Bhd	food	class 100k GMP certified cleanroom @ 20 degC 35%RH	2017	oct	ISO, GMP	ISO8	25,000
COHR malaysia Sdn Bhd	semicon	existing production floor to new cleanroom conversion	2017	oct	ISO	ISO8	5,000
CPI (pg) Sdn Bhd	semicon	existing production floor conversion to cleanroom	2017	Aug	ISO	ISO8	6,000
Analog Devices Sdn Bhd	semicon	existing level 5 & level 6 trim & probe cleanroom extension	2018	Sep	ISO	ISO7	19,900
CPI (pg) Sdn Bhd	semicon	existing production floor conversion to cleanroom	2018	Apr	ISO	ISO8	10,500
Qdos Flexcircuits Sdn Bhd	semicon	new batu kawan penang factory project c/w ACMV, cleanroom, process utilities	2018	may	ISO	ISO 6, ISO7	21,000
Tier I chip maker	semicon	cleanroom extension @ KM2	2018	oct	ISO	ISO8	30,000
VAT Manufacturing Malaysia Sdn Bhd	semicon	new factory project c/w ACMV, cleanroom, process utilities	2018	apr	ISO	ISO6, ISO7, ISO8	65,000
Analog Devices Sdn Bhd	semicon	existing level 5 trim & probe cleanroom extension	2019	Aug	ISO	ISO7	10,000

end client	industry	description	year	month	standard	class	area (ft2)
CPI (pg) Sdn Bhd	semicon	CADANGAN UBAHSUAI GUDANG SEDIADA KEPADA PRODUKSI DI ATAS P.T.NO 4876 , (H.S.(D)10074) MK. 12 D.B.D. DI PLOT NO. 79, LINTANG BAYAN LEPAS 7, KAWASAN PERINDUSTRIAN BAYAN LEPAS, FASA 4, PULAU PINANG.	2019	May	ISO	ISO8	6,000
Globetronics Technology Bhd	semicon	new G4 factory extension c/w ACMV, cleanroom, process utilities	2019	jan	ISO	ISO7	22,000
Hoya Electronics Sdn Bhd	semicon	Class 100 & 10 Clean Room technical cleaning & audit	2019	Dec	ISO	ISO4, ISO5	36,300
Analog Devices Sdn Bhd	semicon	exisitng level 2trim & probe cleanroom extension	2020	Jan	ISO	ISO7	22,500
Gaban Spice Manufacturign (m) Sdn Bhd	food	new cleanroom & cold room expansion c/w temperature & RH control	2020	aug	ISO	ISO8	3,000
Globetronics Technology Bhd	semicon	Convert existing class 100k cleanroom to class 10k & 1K	2020	Mac	ISO	ISO 6 & ISO 7	4,800
Jabil Circuits Sdn Bhd	semicon	new batu kawan penang factory project c/w ACMV, cleanroom, process utilities	2020	apr	ISO	ISO8	80,000
Lam Research International Sdn Bhd	semicon	Existing factory retrofit c/w ACMV, cleanroom, process utilities	2020	Feb	ISO	ISO 7	8,000
Analog Devices Sdn Bhd	semicon	exisitng level 5 trim & probe cleanroom extension	2021	Sep	ISO	ISO7	1,500
Lam Research International Sdn Bhd	semicon	PROPOSED RENOVATION TO EXISTING 1-STOREY WAREHOUSE @ "12 WAVES" BATU KAWAN (ACMV & process utilities installation)	2021	Sept	ISO	ISO8	9,000
Nippon Express (m) Sdn Bhd c/o B Braun Medical Industrial Sdn Bhd	pharmaceutical	new modular cleanroom construction	2021	Oct	ISO; cGMP	ISO5, ISO6, ISO7	2,500
VAT Manufacturing Malaysia Sdn Bhd	semicon	Convert existing phase 1 cleanroom Iso8 to iso6	2021	Sept	ISO	ISO 6	3,500
Analog Devices Sdn Bhd	semicon	new factory project c/w ACMV, cleanroom, process utilities	Ongoing	Ongoing	ISO	ISO7	20,000

Many large buildings, campuses, and other facilities have plants that make chilled water and distribute it to air handling units and other cooling equipment. The design operation and maintenance of these chilled water plants has a very large impact on building energy use and energy operating cost.

Not only do chilled water plants use very significant amounts of electricity (as well as gas in some cases), they also significantly contribute to the peak load of buildings. During this peak event, chilled water plants are often running at maximum capacity. When temperatures are moderate, chilled water plants are shut down or operated in stand-by mode. This variation in the rate of energy use is a major contributor to the peaks and valleys in energy demand, which is one of the problems that must be addressed by utility grid managers.

Most buildings and facilities that have chilled water plants have special utility rates where the cost of electricity depends on when it is used and the maximum rate of use. The price of electricity is several times higher during the summer on-peak than it is during the off-peak periods.

In addition to new construction, the chilled water plants of many existing buildings are being replaced or overhauled. Older chilled water plants have equipment that uses ozone-damaging refrigerants. International treaties, in particular the Montreal Protocol, call for ozone damaging chemicals (in particular CFCs) to be phased out of production. As the availability of CFCs is reduced, the price will skyrocket, creating pressure for chilled water plants to be overhauled or replaced.



Data Center

- Computer Room Air Conditioning (CRAC)
- Uninterruptible Power Supply (UPS)
- Batteries
- Power Line Conditioner (PLC)
- Water Detection System (WDS)
- Aspirating Smoke Detection (ASD)
- Transient Voltage Surge Suppressor (TVSS)
- Automatic Transfer Switch (ATS)
- Environmental Monitoring System (EMS)
- Building Management System (BMS)

ACMV Plant Room

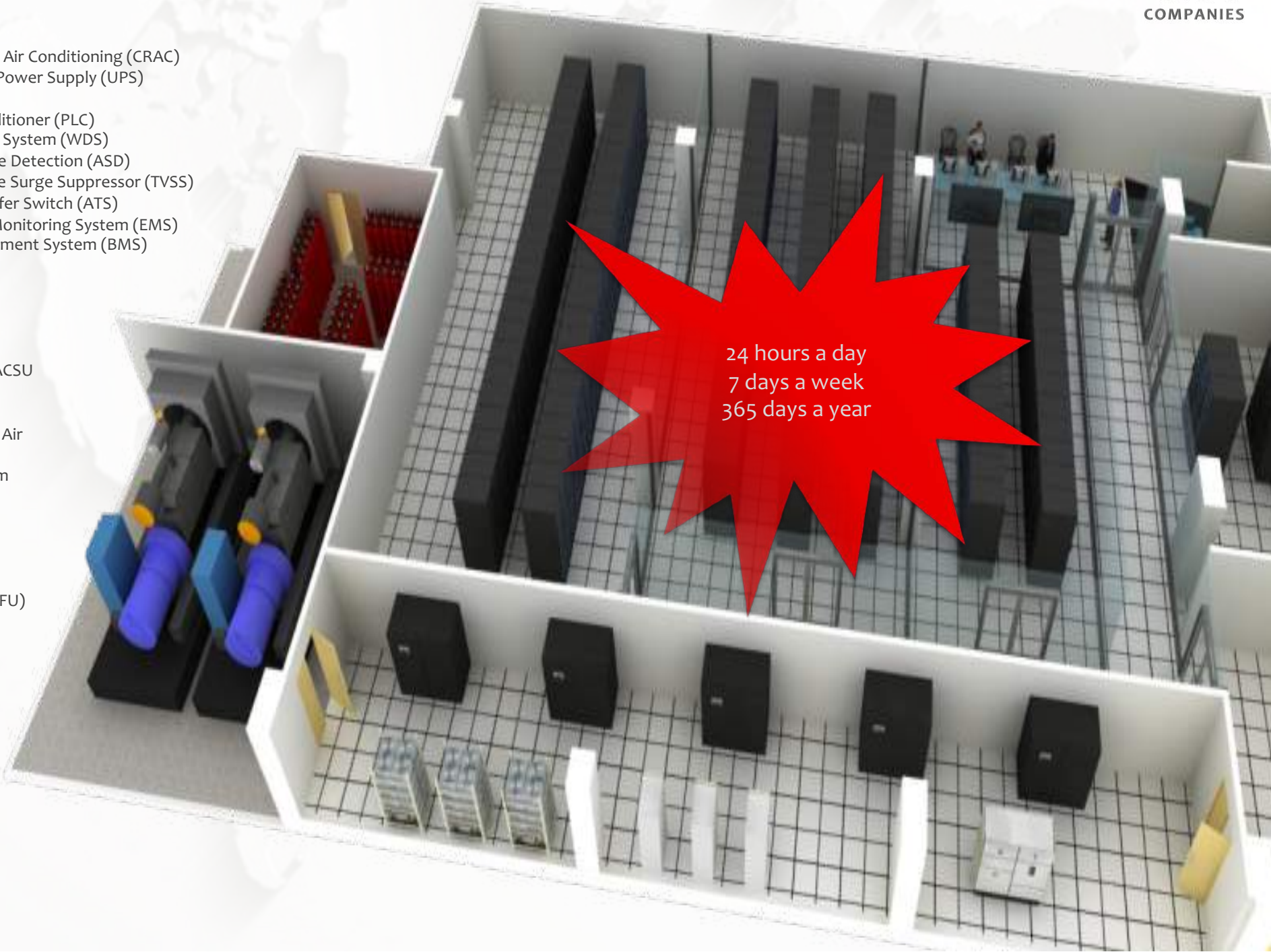
- Chiller
- Pump
- Cooling Tower
- AHU/MAU/FCU/ACSU

Process Utilities

- Compressed Dry Air
- He, Ar, O₂, N₂
- Hot Water, Steam
- RO/DI
- Scrubber
- Exhaust

Cleanroom

- Fan Filter Unit (FFU)
- Dry Cooling Coil



24 hours a day
7 days a week
365 days a year

our client tele
- approved vendor list (avl)



BOSCH



OSRAM



Panasonic



**Western
Digital**



PLEXUS



dyson



**PHILIPS
LUMILEDS**

SCHAWKI!



AMETEK



Schlumberger





our testimonial



our present

Sales & Services Offices

Penang
4,6,8 Cangkat Bukit Belah
11920 Bayan Lepas
Penang, Malaysia
T / +604 649 6033

Kuala Lumpur
RK30A, Jalan Villa 3
Anggerik Villa, Off Jalan Semenyih
43500 Kajang
Selangor DE, Malaysia
T / +603 8723 2033

Ho Chi Minh
Vincom Center Tower
72 Le Thanh Ton,
17th Floor, Unit 11,
Ben Nghe Ward, District 1,
Ho Chi Minh City, Vietnam

Tests & Logistics

Penang
17, Lorong Valdor Jaya 3
Golden Gateway Perindustrian Valdor
14200 Sungai Jawi
Penang, Malaysia

Ho Chi Minh - sales & services

Penang – sales & services

Penang – tests & logistics

Kuala Lumpur – sales & services

our key reference

semiconductor - MEP

client	lam research international sdn bhd
main con	lb brothers sdn bhd
location	batu kawan, penang, malaysia
year	2021
type of project	retrofit
contract amount	RM1,100,000.00
scope	9,000ft2 ISO8 cleanroom (modular cleanroom) 3 x 50hp rooftop unit c/w associated cleanroom solutions - FFU



semiconductor – CSA, ID, MEP fit up

client	ametek engineered materials sdn bhd – plant 2
location	penang free industrial zone, malaysia
year	2021
type of project	retrofit
contract amount	RM8,000,000.00
scope	2-storey office CSA/ID/MEP fit up



- 40,000ft2 production floor CSA/MEP installation
- 11kV trans & gear upgrading
- 6 x 40rt air cooled chiller c/w associated air side AHU/FCU
- 2 x 50hp oil free air compressor c/w receiver tank, air dryer
- GEX & fume exhaust
- fire sprinkle system c/w tank, pumps
- electrical & distribution board hook up for production machine



semiconductor - MEP

client qdos flexcircuits sdn bhd
main con kok construction sdn bhd
location batu kawan, penang, malaysia
year 2018
type of project base build
contract amount RM10,800,000.00
scope acmv

iso 8, iso 7, iso 6 cleanroom

process utilities c/w scrubber system, cda system, ro/di, gex system,
machine hook up



semiconductor - MEP

client vat manufacturing Malaysia sdn bhd
main con byg projects sdn bhd
location batu kawan, penang, malaysia
year 2018
type of project base build
contract amount RM8,000,000.00
scope

New factory expansion involving 170,000ft2 area ACMV set up,
including of 55,000ft2 cleanroom (ISO6 & ISO8) c/w 15ft Height,
walkable ceiling, 2 nos Oil Free Air Compressor, Helium Exhaust,
smoke spill system, Dry Cooling Coil, 3 nos chiller, and other
associated services



medical/ pharmaceutical - MEP

client	dexcom (m) sdn bhd
main con	byg projects sdn bhd
location	batu kawan, penang, malaysia
year	2021
type of project	retrofit
contract amount	RM3,300,000.00
scope	2 x 190rt air cooled chiller c/w associated air & water side, ducting & piping installation 2 x ofa system c/w ss304 piping installation

dexcom



medical/ pharmaceutical - MEP

client	synergy sterilisation (malaysia) sdn bhd
location	kuala kertil industrial park, kedah,, malaysia
year	2021
type of project	base build
contract amount	RM6,000,000.00
scope	2 x 250rt air cooled chiller c/w associated air side AHU/MAU/FCU for production; 1 x vrf system for office block concrete wall cooling for rhodotron x-ray horn (ss316 coil instead of copper coil, to avoid coil material melting)

STERIS
Applied Sterilization Technologies



semiconductor - MEP

client	robert bosch (malaysia) sdn bhd
main con	south island building sdn bhd
location	penang free industrial zone, malaysia
year	2019
type of project	retrofit
contract amount	RM2,180,000.00
scope	acmv

BOSCH



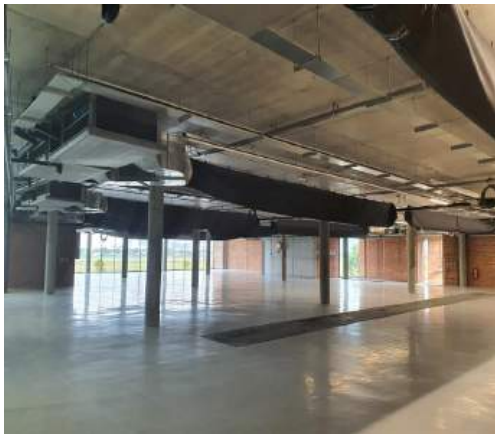
semiconductor - MEP

client	lam research international sdn bhd
main con	lb brothers sdn bhd
location	penang free industrial zone, malaysia
year	2020
type of project	retrofit
contract amount	RM3,800,000.00
scope	installation of 3 sets of VRF systems cover its 3 level offices & café, 3 nos air cooled chiller c/w associated services for ACMV, ISO7 Cleanroom, process utilities that cover OFA, PCW, GEX & High Purity Gasses piping (Grade 5.0 or 99.999%).



semiconductor - MEP

client	aemulus sdn bhd
main con	mlg design & construction sdn bhd
location	penang free industrial zone, malaysia
year	2020
type of project	base build
contract amount	RM1,500,000.00
scope	OPEN CONCEPT & BARE FINISHED' Factory Building Energy efficient VRF c/w fabric ducting installation in the expose way suit to architect's building conceptual design, and GREEN



semiconductor - MEP

client	osram opto sdn bhd
location	kulim hi-tech park, kedah, malaysia
year	2019
type of project	basebuild
contract amount	RM1,300,000.00
scope	New factory involving PCW set up, covering stainless steel ducting , PP process piping, SCH80 PVC process piping



semiconductor - MEP

client	jabil sdn bhd
main con	kok construction sdn bhd
location	kulim industrial park, kedah, malaysia
year	2021
type of project	retrofit
contract amount	RM9,000,000.00
scope	3 x 250rt air cooled chiller c/w associated water & air side, ducting & chw piping installation 5.0 (99.999%) high purity piping system installation for he, n2, ar gas 2 x ofa system c/w ss304 piping installation



semiconductor - MEP

client	globetronics technology bhd
main con	hong poh engineering & construction sdn bhd
location	penang free industrial zone, malaysia
year	2021
type of project	base build
contract amount	RM2,000,000.00
scope	2 x 230rt water cooled chiller c/w air & water side equipment, ducting & piping installation



semiconductor - MEP

client jabil sdn bhd
main con tialoc sdn bhd
location batu kawan, penang, malaysia
year 2020
type of project base build
contract amount RM10,100,000.00
scope acmv



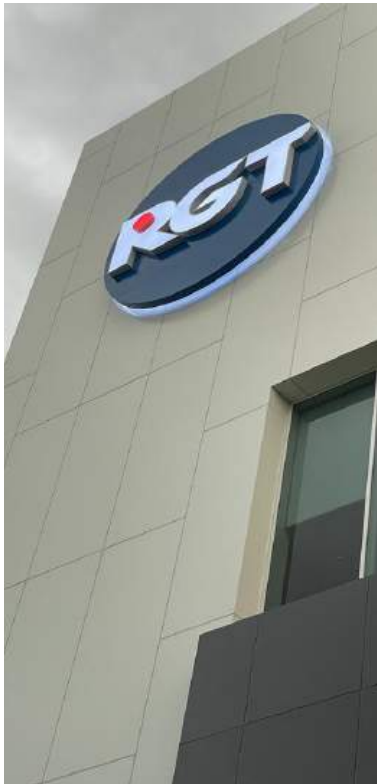
semiconductor - MEP

client mi autobotics sdn bhd
main con kok construction sdn bhd
location batu kawan, penang, malaysia
year 2020
type of project base build
contract amount RM3,500,000.00
scope acmv



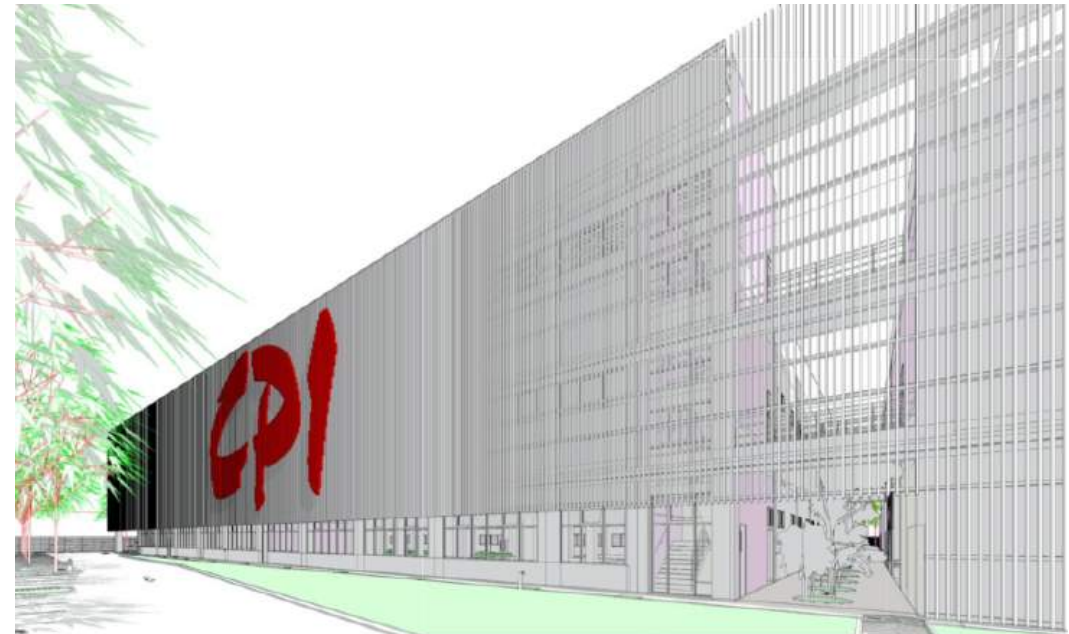
semiconductor - MEP

client	rgt berhad – new B2, B3, B4 & B5 building
main con	kok construction sdn bhd
location	penang science park, malaysia
year	2021
type of project	base build
contract amount	RM5,000,000.00
scope	2 x 230rt water cooled chiller c/w air & water side equipment, ducting & piping installation 6 x 40rt air cooled chiller c/w associated water & air side equipment, and ducting & piping installation 2 x vrf system c/w piping & ducting installation 2 x cda system c/w piping installation



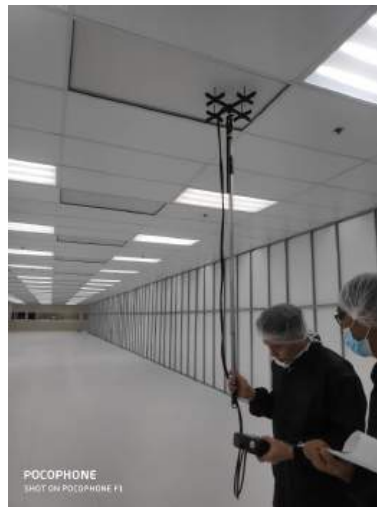
semiconductor - MEP

client	cpi (pg) sdn bhd – plant 2 (electronics)
main con	kok construction sdn bhd
location	penang free industrial zone, malaysia
year	2021
type of project	base build
contract amount	RM3,500,000.00
scope	2 x 300rt water cooled chiller c/w air & water side equipment, ducting & piping installation 2 x cda system c/w piping installation



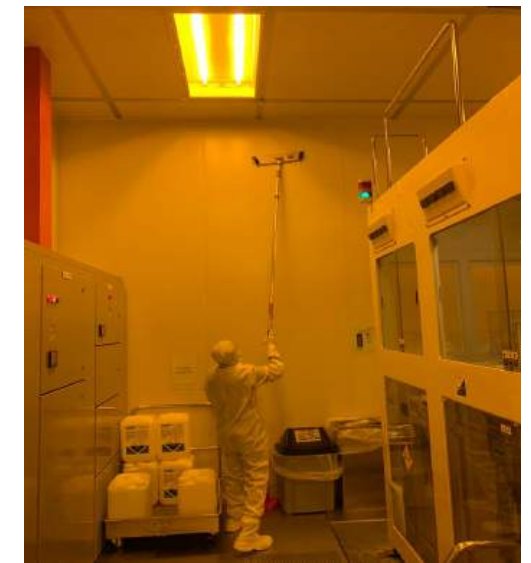
semiconductor - MEP

client analog devices sdn bhd
location penang free industrial zone, malaysia
year 2018
type of project retrofit
contract amount RM1,750,000.00
scope 21,000ft2 cold shell area conversion to iso7 cleanroom
standard fm approved



semiconductor - MEP

client hoya electronics sdn bhd
location kulim hi-tech park, kedah, malaysia
year 2020
type of project retrofit
contract amount RM800,000.00
scope To perform a total technical cleaning to HOYA Class 10 & Class 100
Cleanroom c/w NEBB certification
To supply and install Centralized Particle Monitoring System (PMS) to its
Class 100 Cleanroom, to continuous monitoring to its cleanroom cleanliness



key references

warehouse - MEP

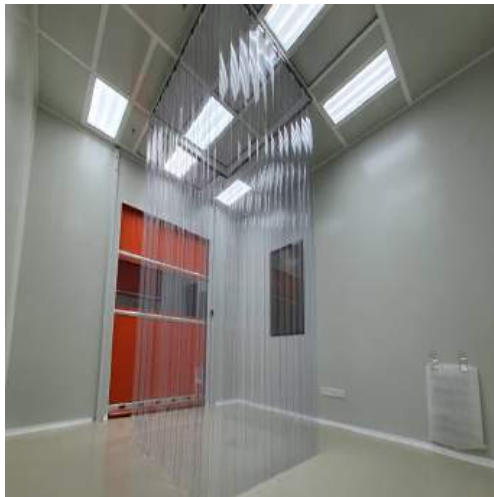
client	nippon express (m) sdn bhd
location	penang free industrial zone, malaysia
year	2021
type of project	retrofit
contract amount	RM2,300,000.00
scope	2 x air cooled chiller c/w associated air & water side, ducting & piping installation ISO8 & ISO 7 cleanroom cGMP certified



NIPPON EXPRESS

warehouse - MEP

client	dhl supply chain (malaysia) sdn bhd warehouse
location	batu kawan, penang, malaysia
year	2021
type of project	retrofit
contract amount	RM4,000,000.00
scope	180,000ft2 x 50ft height warehouse (kew1, kew2, etika) c/w control temperature & RH; 540rt air cooled roof top unit, ducting & SSF system installation



call center – MEP

client	dell global business center
location	penang free industrial zone, malaysia
year	2021
type of project	retrofit
contract amount	RM3,000,000.00
scope	1 x 650rt vfd water cooled chiller c/w fm approved cooling tower, chw pump & cw pump, mcc & associated electrical wiring & piping installation
standard	fm approved



data center – MEP

client	dell global business center
location	penang free industrial zone, malaysia
year	2021
type of project	retrofit
contract amount	RM5,100,000.00
scope	to construct a TIER III data center, with Dual Active Path (both capacity & distribution). The data center set to house 80 nos of racks (phase 1), each 9kW, of total 9,000ft2 white space, to support to its existing 500,000ft2 manufacturing plant, and also provide redundancy to its Asia Pacific operation. 9 x 30rt dual cooling crac, 3 x 600amp sts, 2 x 250kW modular ups, vesda, water detection system, 2 x hot aisle containment
standard	fm approved



call center – CSA, ID, MEP fit up

client	dell global business center – new 500pax office
location	penang free industrial zone, malaysia
year	2020
type of project	base build
contract amount	RM2,600,000.00
scope	New 20,000ft2 office c/w CSA (piling, slab, structure, ceiling & roof) & MEP (ACMV, Fire protection & electrical)
standard	fm approved



call center – MEP

client	aia berhad
location	strait quay, penang, malaysia
year	2018
type of project	retrofit
contract amount	RM1,900,000.00
scope	New Customer Service & Call Centre involving M&E services installation – Air Conditioning & Ventilation, Fire, Electrical, incorporated into the in-house ID main con. design



data center - MEP

client	jabatan pengaliran & saluran (jps), selangor, malaysia
location	kl, malaysia
year	2017
type of project	retrofit
contract amount	RM720,000.00
scope	New TIER III Data Center set up involving 3 nos DX Row Cooling, Cold Aisle Containment, VESDA, EMS, 2 lots IG55, Water Detection System



data center – MEP

client	dell global business center
location	penang free industrial zone, malaysia
year	2018
type of project	retrofit
contract amount	RM3,600,000.00
scope	Life TIEW III Data Center Design & Build upgrade, CSA & MEP supporting up to 600kW of server loading
standard	fm approved



oil & gas - MEP

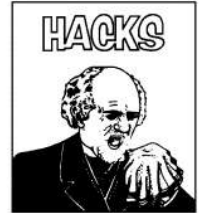
client	schlumberger asia center for reliability and efficiency
main con	tialoc sdn bhd
location	pkfz, selangor, malaysia
year	2015
type of project	base build
contract amount	RM3,700,000.00
scope	Project involving supply, install, testing & commissioning ACMV, CDA, Desiccant Wheel System, Smoke Spill System, Process Utility & BMS
standard	leed certified fm approved

Schlumberger



food - MEP

client	hacks Malaysia sdn bhd
main con	estagold sdn bhd
location	juru industrial park, penang, malaysia
year	xx2017
type of project	base build
contract amount	RM4,500,000.00
scope	class 100k GMP certified cleanroom @ 20 degC 35%RH 3 x 150rt air cooled chiller c/w air & water side installation 2 x 11,000cmh desiccant dehumidifier system steam piping system c/w calcium carbonate insulation



hotel – MEP

client	gleneagle hospital
location	penang, malaysia
year	2018
type of project	retrofit
contract amount	RM2,000,000.00
scope	Chiller plant room upgrading involving replacement of 3 nos water cooled chiller, 1000RT cooling tower, MCC, CHW & CW pump, chiller cooler insulation with PU c/w GI jacketing



hotel – MEP

client	bayview beach hospital
location	penang, malaysia
year	2018
type of project	retrofit
contract amount	RM2,000,000.00
scope	Project involving chiller plant room upgrading, 3 nos (1VSD + 2 Fix Speed) water cooled chiller, 3000Amp MCC panel, upgrading and associated work @ basement level









	Owner Main Con Year Location Contract Amount Type of Project Scope Compliance	Western Digital Tialoc Sdn Bhd 2015 Penang RM570,000.00 Retrofit new Data Center installation FM approved
	Owner Year Completion Location Contract Amount Type of Project Scope	Motorola Aug 2015 Penang RM620,000.00 Retrofit 2 new Data Center installation
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Dell Feb 2014 APCC1 DC1 Penang RM340,000.00 Retrofit Data Center ACMV Upgrading FM Global Approved
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	First Solar Jun 2015 Kulim Hi-Tech Park, Kedah RM775,000.00 Retrofit New Data Center CRAC Upgrading (4 Data Centers) FM Global Approved
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Dell Sep 2016 APCC2 DC1 Bukit Minyak Penang RM800,000.00 New Installation Project involving Data Center Battery Monitoring System (BMS) Installation FM Global Approved

	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Dell Jun 2017 APCC1 DC2 Penang RM1,800,000.00 New Installation new Tier III Data Center Installation FM Global Approved
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Jabatab Pengaliran & Saluran (JPS) ETE Sdn Bhd Sep 2017 Ampang, Selangor RM720,000.00 Retrofit New TIER III Data Center set up
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Dell Feb 2018 APCC1 DC2 Penang RM3,600,000.00 NEW DATA CENTER Data Center ACMV Upgrading FM Global Approved
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Dell Feb 2018 APCC1 CEDAR LAB, Penang RM2,800,000.00 NEW REGIONAL TRAINING CENTER Data Center CRAC, UPS, EMS, BMS installation FM Global Approved
	Owner Contractor Target Completion Location Contract Amount Type of Project Scope Compliance	Micron Polycool HTE Engineering Sdn Bhd Aug 2020 Batu Kawan Industrial Zone, Penang RM1,200,000.00 Base Build 12 nos 22RT dual cooling (DX+CHW) PAC for Data Center Fm approved

	<p>Owner Year Completion Location Contract Amount Type of Project Scope</p>	<p>Dell Global Business Centre Sdn – AP2 Target Dec 2020 Bukit Minyak, Penang, Malaysia RM3,500,000.00 Upgrading to construct a TIER III data center, with Dual Active Path (both capacity & distribution). The data center set to house 80 nos of racks (phase 1), each 9kW, of total 9,000ft2 white space, to support to its existing 500,000ft2 manufacturing plant, and also provide redundancy to its Asia Pacific operation.</p>
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	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	AIA Facility Link/ Ivana Deco 2018 Straight Quey, Penang RM3,100,000.00 New Call Center Set Up Project involving all M&E services
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	DELL APCC1 Jan 2020 Bayan Lepas Industrial Zone, Penang RM1,950,000.00 Retrofit 20,000ft2 office space covering CSA, MEP FM Global Approved
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Robert Bosch (M) Sdn Bhd South Island Building Sdn Bhd Jan 2020 Penang, Malaysia RM2,300,000.00 Upgrading ACMV upgrading to its office & café
	Owner Main Con Architect Year Completion Location Contract Amount Type of Project Scope	Aemulus Holding Berhad MLG Design & Construction Sdn Bhd Design Unit Jun 2020 Penang RM1,500,000.00 'OPEN CONCEPT & BARE FINISHED' Factory Building Energy efficient VRF c/w fabric ducting installation in the expose way suit to architect's building conceptual design, and GREEN
	Owner Year Completion Location Contract Amount Type of Project Scope	Dell Global Business Centre Sdn – AP1 Target Dec 2020 Bayan Lepas Free Industrial Zone, Penang, Malaysia RM2,000,000.00 Upgrading ACMV & Fire Protection upgrade for Dell Phase 1,2&3 office zone area






	Owner Year Completion Location Contract Amount Type of Project Scope	U Mobile Nov 2015 Subang Hi-Tech, Selangor RM1,490,000.00 Retrofit Project involving new TELCO ACMV upgrading, 7 nos CRAC, 2 nos 240kW Modular UPS, 3 sets CAC, and associated services
	Owner Year Completion Location Contract Amount Type of Project Scope	Maxis Nov 2016 Subang Hi-Tech, Selangor RM450,000.00 Retrofit Project involving new TELCO ACMV's CRAC unit outdoor condenser total change-out
	Owner Year Completion Location Contract Amount Type of Project Scope	Maxis Jan 2018 Nationwide RM6,200,000.00 Retrofit Project involving new 900 nos TELCO outdoor free-cooling total change-out

	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	First Solar Apr 2016 Kulim Hi-Tech Park, Kedah RM1,035,000.00 Retrofit Project Involving New Acid Scrubber System Installation FM Global Approved
	Owner Year Completion Location Contract Amount Type of Project Scope	TS Solartech Jun 2016 Penang Science Park RM3,300,000.00 New Installation Project involving supply, install, testing & commissioning UPS/FC system, having capacity up to 5.5MW
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	First Solar Dec 2016 Kulim Hi-Tech Park, Kedah RM1,700,000.00 Retrofit Project Involving KLM 1&2 T&R New ACMV Installation FM Global Approved

	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Entegris Nov 2015 Kulim Hi-Tech Park, Kedah RM950,000.00 Retrofit Project involving ACMV Upgrading, 3 nos air cooled chiller, associated mechanical work FM Global Approved
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Classified (Top Tier Semincon Player) Johnson Control Dec 2015 Penang RM180,000.00 Retrofit Project involving chiller plant room upgrading, 1 nos 800RT water cooled chiller replacement
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Latexx (Semperit) Dec 2015 Taiping, Perak RM4,700,000.00 Base Build Project involving Process Utility pipe work, Boiler pipe work, Natural Gas pipe work, & mechanical Ventilation system FM Global Approved
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	VAT BYG Projects Sdn Bhd Mar 2016 Penang RM380,000.00 Retrofit Project involving new ISO6 & ISO8 cleanroom set up
	Owner Year Completion Location Contract Amount Type of Project Scope	Osram Jan 2017 Penang RM950,000.00 Retrofit New Oil Free Compressed Air System in Wafer Plant

	Owner Year Completion Location Contract Amount Type of Project Scope	Osram Aug 2017 Penang RM800,000.00 Retrofit New PEN5 ISO8 Cleanroom set up
	Owner Year Completion Location Contract Amount Type of Project Scope	CPI Oct 2017 Penang RM1,800,000.00 Retrofit New ISO8 cleanroom set up, having total area of 32,000ft2. PU ducting instead of GI ducting deployed, to achieve to a better workmanship
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	TF-AMD Tialoc Sdn Bhd Oct 2017 Penang RM4,000,000.00 Base Build New factory set up involving total CHW, CW, CDA, Process Piping Work
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	VAT BYG Projects Sdn Bhd Jun 2018 Penang RM7,000,000.00 Base Build New factory expansion involving 170,000ft2 area ACMV set up, including of 55,000ft2 cleanroom (ISO6 & ISO8), OFA, smoke spill system, DCC, 3 nos chiller, and other associated services

	Owner Year Completion Location Contract Amount Type of Project Scope	Coherent Mar 2018 Penang RM1,000,000.00 New Factory Extension As the main contractor for the entire project upgrading, that scope of the contract stretching from civil & structural upgrading, new mechanical (ACMV, Process Utility, Fire Protection) & electrical installation.
	Owner Year Completion Location Contract Amount Type of Project Scope	CPI 2018 Penang RM1,200,000.00 Retrofit New ISO8 cleanroom set up, having total area of 20,000ft2
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	QDOS KOK CONSTRUCTION SDN BHD JAN 2018 Batu Kawan Industrial Park, Penang RM8,000,000.00 Base Build New factory set up involving total CHW, CW, CDA, Process Piping Work, and all equipment
	Owner Year Completion Location Contract Amount Type of Project Scope	QDOS Dec 2018 Phase 2, Penang Free Trade Zone, , Penang RM2,650,000.00 Upgrading Factory upgrade involving total CHW, CW, CDA, Process Piping Work and all equipment
	Owner Year Completion Location Contract Amount Type of Project Scope	Globetronics 2018 Penang RM2,500,000.00 New Factory Extension New 20,000ft2 class 10k cleanroom, inclusive of chiller plant room, ahu room, and necessary services



	Owner Year Completion Location Contract Amount Type of Project Scope	ADI 2018 Free Trade Zone, Penang RM1,800,000.00 New 20,000ft2 class 100k & 10k cleanroom
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Osram Tialoc Sdn Bhd 2018 Kulim Hi-Tech Park, Kedah RM1,350,000.00 Retrofit New process utility system set up
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Classified MNC Tialoc Sdn Bhd 2018 Kulim Hi-tech Park, Kedah RM2,300,000.00 Re-trofit Exisiting factory mechanical & electrical services dismantling
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Classified MNC Tialoc Sdn Bhd 2018 Kulim Hi-tech Park, Kedah RM5,200,000.00 Re-trofit ACMV ducting, CHW & CW piping, and process utility piping installation
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Classified MNC Tialoc Sdn Bhd 2018 Kulim Hi-tech Park, Kedah RM3,500,000.00 Re-trofit ACMV ducting, CHW & CW piping, and process utility piping installation

	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Classified MNC JLL 2018 Free Trade Zone, Penang RM1,100,000.00 Re-trofit CDA upgrading consisting of air compressor c/w air dryer, filters and other associated services
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Carsem (M) Sdn Bhd York (M) Sdn Bhd 2018 Jelapang, Ipoh, Perak RM900,000.00 Retrofit ACMV upgrading involving CHW & CW piping installation, pumps, and other necessary services
	Owner Year Completion Location Contract Amount Type of Project Scope	Bosch 2019 Penang Free Trade Zone RM780,000.00 Re-trofit Compressed dry air system cover oil free air compressor, air dryer, filters, piping, wiring, and other necessary services
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Infineon Kulim York (M) Sdn Bhd Target 2019 Kulim Hi-Tech Park, Kulim, Kedah RM480,000.00 Re-trofit Chiller condenser body insulation & AHU installation
	Owner Year Completion Location Contract Amount Type of Project Scope	CPI 2019 Penang RM450,000.00 Retrofit New ISO7 cleanroom set up, smoke spill system & CDA system

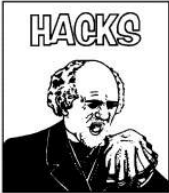


	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Aemulus Corporation (SEMICON) MLG Design & Construction Sdn Bhd Target 2019 Free Trade Industrial Zone, Penang RM1,500,000.00 Base Built ACMV by installing energy efficient VRF system
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Jabil Circuit Tialoc Sdn Bhd Jun 2020 Batu Kawan Industrial Park, Penang RM6,500,000.00 Base Built New ACMV ducting work
	Owner Year Completion Location Contract Amount Type of Project Scope	Dell Global Business Centre Sdn – AP2 Target Sep 2020 Bukit Minyak, Penang, Malaysia RM1,700,000.00 Upgrading Chiller plant room upgrade c/w 800rt water cooled chiller, FM approved cooling tower, MCC, CHWP & CWP c/w VSD control
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	DELL APCC1 Jan 2020 Bayan Lepas Industrial Zone, Penang RM600,000.00 Retrofit BMS system covering DELL Malaysia – Penang, Cyberjaya, monitoring ACMV & Data Center MEP FM Global Approved
	Owner Year Completion Location Contract Amount Type of Project Scope	Hoya Electronics Feb 2020 Kulim Hi-Tech Park, Kedah RM490,000.00 Retrofit New online life particle monitoring system for Class 100 cleanroom



	Owner Year Completion Location Contract Amount Type of Project Scope	Hoya Electronics Mar 2020 Kulim Hi-Tech Park, Kedah RM180,000.00 Retrofit Class 100 & Class 10 technical cleaning
	Owner Contractor Target Completion Location Contract Amount Type of Project Scope	Micron Polycool HTE Engineering Sdn Bhd Feb 2020 Batu Kawan Industrial Zone, Penang RM3,500,000.00 Base Build 51 nos 32RT CHW PAC for class 100k cleanroom
	Owner Year Completion Location Contract Amount Type of Project Scope	Paradigm Metal Industries Dec 2019 Prai Industrial Park, Penang RM2,350,000.00 Base Up ACMV covering Air Cond, Smoke Spill SYstem, Process Utilise covering Compressed Air System, General Exhaust System
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Mi Equipment Kok Construction Sdn Bhd Dec 2019 Batu Kawan Industrial Park, Penang RM4,000,000.00 Base Build 300RT chilled water system for production, warehouse, 120RT VRF for offices, smoke spill system, compressed dry air system, general exhaust system, etc
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Analog Devices Dec 2019 Bayan Lepas Industrial Zone, Penang RM1,480,000.00 Re-trofit Cleanroom conversion from class 100k to class 10k FM Global

	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Analog Devices Dec 2019 Bayan Lepas Industrial Zone, Penang RM350,000.00 Re-trofit New link bridge office MEP services FM Global
	Owner Year Completion Location Contract Amount Type of Project Scope	Micron Dec 2019 Prai Industrial Zone, Penang RM980,000.00 Base Build 12 nos 26RT DX PAC for class 100k cleanroom
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Jabil Circuit Sdn Bhd Kok Construction Sdn Bhd Target Jan 2021 Kulim Industrial Park, Kedah RM7,500,000.00 Base Build To construct a new manufacturing facilities covering ACMV & Process Utilities such as OFA, PCW, GEX, High Purity Gasses (Grade 5.0 or 99.999%) piping
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Bosch South Island Builder Sdn Bhd 2019 Penang Free Trade Zone RM600,000.00 Re-trofit Demolition of existing old factory, to supply and install new ACMV system
	Owner Year Completion Location Contract Amount Type of Project Scope	CPI (Penang) Sdn Bhd Target Jun 2021 Bayan Lepas Free Trade Zone, Penang, Malaysia RM3,000,000.00 Green Field New ACMV, Class 100k Cleanroom & Process Utilities System for new 4-storey semiconductor factory

	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	RGT Berhad KOK Construction Sdn Bhd May 2021 Bukit Minyak Industrial Park, Penang RM4,500,000.00 Greenfield New ACMV c/w 4 nos chiller system, AHU, FCU & VRF system; process utilities system, smoke spill systm
	Owner Year Completion Location Contract Amount Type of Project Scope	Ametek engineered materials sdn bhd 2021 Penang RM8,000,000.00 retrofit 2-storey office CSA/ID/MEP fit up 40,000ft2 production floor CSA/MEP installation <ul style="list-style-type: none"> - 11kV trans & gear upgrading - 6 x 40rt air cooled chiller c/w associated air side AHU/FCU - 2 x 50hp oil free air compressor c/w receiver tank, air dryer - GEX & fume exhaust - fire sprinkle system c/w tank, pumps - electrical & distribution board hook up for production machine


	<p>Owner Year Completion Location Contract Amount Type of Project Scope</p>	<p>DHL Supply Chain (Malaysia) Sdn Bhd Aug 2020 Kulim Industrial Park (KEW1, KEW2, ETIKA) RM4,000,000.00 retrofit 180,000ft² x 50ft height warehouse (kew1, kew2, etika) c/w control temperature & RH; 540rt air cooled roof top unit, ducting & SSF system installation</p>
	<p>Owner Year Completion Location Contract Amount Type of Project Scope</p>	<p>Nippon Express April 2021 Bayan Lepas Industrial Park, Penang RM2,500,000.00 Retrofit ISO6 & ISO8 Cleanroom, and Coldroom for new warehousing storage requirement from Nippon Express's ultimate client</p>

	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Hacks Estagold Sdn Bhd Oct 2017 Penang RM5,800,000.00 Base Build New factory involving ACMV set up, production having 20degC 35%RH environment GMP certified
	Compliance	
	Owner Year Completion Location Contract Amount Type of Project Scope Compliance	Sun Phama Mar 2017 Sg Petani, Kedah RM320,000.00 Retrofit Water cooled chiller replacement GMP certified
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Rembina Sdn Bhd South Island Sdn Bhd Jan 2016 Penang RM1,750,000.00 Base Build Project involving ACMV, CDA ISO8 Cleanroom, Smoke Spill System, BMS system GMP Certified
	Compliance	
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Aspen Glove Sdn Bhd Tialoc Sdn Bhd Target Mar 2021 Kulim Hi-Tech Park, Kedah, Malaysia RM2,500,000.00 Greenfield New chilled water & process piping system supporting entire glove manufacturing factory




	client location year type of project contract amount scope	synergy sterilisation (malaysia) sdn bhd kuala kertil industrial park, kedah,, malaysia 2021 base build RM6,000,000.00 2 x 250rt air cooled chiller c/w associated air side AHU/MAU/FCU for production; 1 x vrf system for office block concrete wall cooling for rhodotron x-ray horn (ss316 coil instead of copper coil, to avoid coil material melting)
	client main con location year type of project contract amount scope water side, ducting & piping installation	dexcom (m) sdn bhd byg projects sdn bhd batu kawan, penang, malaysia 2021 retrofit RM3,300,000.00 2 x 190rt air cooled chiller c/w associated air & 2 x ofa system c/w ss304 piping installation

	Owner Year Completion Location Contract Amount Type of Project Scope	Pantai Hospital Sep 2015 Sg Petani, Kedah RM720,000.00 Retrofit Project involving 2 nos 300RT water cooled chiller replacement @ level 3 Sustainable Energy Development Authority Malaysia (SEDA)
	Owner Year Completion Location Contract Amount Type of Project Scope	Pantai Hospital Oct 2017 Penang RM1,800,000.00 Retrofit Project involving chiller plant room upgrading, 3 nos 300RT water cooled chiller, 2 nos 500Rt cooling tower, 2000Amp MCC panel, and associated work @ Level 6 roof top
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Pantai Hospital SP LK Design Sdn Bhd Target 2019 SP, Kedah RM350,000.00 Re-trofit New ACMV installation cover AHU, FCU, for CDR room







	Owner	Schlumberger
	Year Completion	Jun 2015
	Main Con	Tialoc Malaysia Sdn Bhd
	Location	Port Klang Free Zone (PKFZ), Klang, Selangor
	Contract Amount	RM3,700,000.00
Type of Project Scope		Base Build
		Project involving supply, install, testing & commissioning
		ACMV, CDA, Desiccant Wheel System, Smoke Spill
		System, Process Utility & BMS
Compliance		LEED Certified by U.S Green (SEDA)

	Owner Year Completion Main Con Location Contract Amount Type of Project Scope	TUDM (Air Force) Malaysia Jan 2015 Sapura Defence Sdn Bhd Butterworth, Penang RM930,000.00 Retrofit Project involving supply, install, testing & commissioning ACMV, 2*150RT air cooled chiller, CRAC, and BMS
	Owner Year Completion Main Con Location Contract Amount Type of Project Scope	TUDM (Air Force) Malaysia Dec 2015 Wekajaya Sdn Bhd Kota Samarahan, Kuching, Sarawak, Malaysia RM2,900,000.00 Base Build Project involving supply, install, testing & commissioning ACMV, 2*300RT water cooled chiller, Smoke Spill System, and BMS
	Owner Year Completion Main Con Location Contract Amount Type of Project Scope	TUDM (Air Force) Malaysia Dec 2016 Wekajaya Sdn Bhd Gunung Ngili, Kuching, Sarawak, Malaysia RM1,590,000.00 Base Build Project involving supply, install, testing & commissioning ACMV, UPS systems, BMS
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Thai Consulate Prestige Construction Oct 2017 Penang RM700,000.00 Base Build New consulate building completed with full VRV system, and associated services

	Owner Year Completion Location Contract Amount Type of Project Scope	Putrajaya Holding Oct 2017 Putrajaya, Selangor RM1,050,000.00 New Installation Project involving supply, install, testing & commissioning UPS system, having capacity up to 1.2MW (4 nos 300kVA)
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	SOC II, TUDM Kuantan, Pahang Bumitegap Sdn Bhd Target 2019 Kuantan, Pahang RM500,000.00 Base Built 14 nos Precision Air Cond (PAC) installation
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Thai Consulate LK Design & Construction Target Dec 2020 Penang RM200,000.00 Upgrading Existing old consulate building completed with full VRV system, and associated services





	Owner Year Completion Location Contract Amount Type of Project Scope	Bayview Beach Resort May 2018 Batu Ferringhi, Penang RM1,500,000.00 Retrofit Project involving chiller plant room upgrading, 3 nos (1VSD + 2 Fix Speed) water cooled chiller, 3000Amp MCC panel, upgrading and associated work @ basement level
	Owner Year Completion Location Contract Amount Type of Project Scope	ET Hospitality Sdn Bhd 2017 Georgetown, Penang RM480,000.00 Base Built Boutique Hotel having new VRV installation for all the guest room, hall, and other associated services
	Owner Year Completion Location Contract Amount Type of Project Scope	Persatuan Buddist Liulishan 2018 Tangjong Sepat, Sepang, Selangor RM1,020,000.00 Base Built ACMV cover entire building inclusive of rooms, by installing VRF system for energy efficient environment
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	100 Suits+Residence (HOTEL) LSH Construction Sdn Bhd Target 2019 Bayan Baru, Penang RM1,390,000.00 Base Built ACMV cover air pressurization and smoke venting system
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Mahindarama Buddhist Temple Onice Bina Sdn Bhd Target 2019 Georgetown, Penang RM430,000.00 Base Built ACMV cover aircond, air pressurization and smoke venting system



	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Brown Hotel Main Construction (M) Sdn Bhd Target 2019 Georgetown, Penang RM330,000.00 Base Built ACMV cover 10 storey guest rooms aircond, air pressurization and smoke venting system
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	The Gallivant Hotel AE Advanced Sdn Bhd 2020 Penang RM350,000.00 Base Built ACMV involving air conditioning for 5 storey guest rooms, smoke venting system & air pressurization
	Owner Main Con Year Completion Location Contract Amount Type of Project Scope	Kedah State Government (TOURISM) Jayasarana Target 2019 Kuah Town, Langkawi RM3,300,000.00 Base Built ACMV by installing energy efficient VRF system
	Owner Year Completion Location Contract Amount Type of Project Scope	Venice Properties Sdn Bhd (HOTEL) March 2020 Penang RM2,300,000.00 Base Built ACMV involving air conditioning, smoke venting system & air pressurization. Heat Pump system for hot water
	Owner Year Completion Location Contract Amount Type of Project Scope	Fairview International School Target Feb 2021 Bukit Jambul, Penang, Malaysia RM500,000.00 Retrofit New ACMV system for the new building





	Owner Location Type of Contract Scope Compliance	First Solar Kulim Hi-Tech Park, Kedah Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, CRAC, UPS service, maintenance & hook-up FM Global
	Owner Location Type of Contract Scope Compliance	Pantai Hospital Sungai Petani, Kedah Facilities Maintenance Yearly renewal contract covering ACMV, service, maintenance & hook-up MSQH Compliance
	Owner Location Type of Contract Scope Compliance	Amanjaya Hospital Sungai Petani, Kedah Facilities Maintenance Yearly renewal contract covering ACMV, service, maintenance & hook-up MSQH Compliance
	Owner Location Type of Contract Scope Compliance	Robert Bosch Bayan Lepas Industrial Zone, Penang Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, service, maintenance & hook-up FM Global
	Owner Location Type of Contract Scope Compliance	Loh Guan Lye Hospital Penang Facilities Maintenance Yearly renewal contract covering ACMV, UPS service, maintenance & hook-up MSQH Compliance
	Owner Location Type of Contract Scope Compliance	Island Hospital Penang Facilities Maintenance Yearly renewal contract covering ACMV, UPS service, maintenance & hook-up MSQH Compliance



	Owner Location Type of Contract Scope	Hume Cement Gopeng, Perak Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, UPS service, maintenance & hook-up
	Owner Location Type of Contract Scope Compliance	Western Digital Penang Facilities Maintenance Yearly renewal contract covering Data Center's CRAC, UPS, WLD, EMS, VESDA service, maintenance & hook-up FM Global Approved
	Owner Location Type of Contract Scope Compliance	Philips Lumileds Penang Facilities Maintenance Yearly renewal contract covering Data Center's CRAC, UPS, WLD, EMS, VESDA service, maintenance & hook-up FM Global Approved
	Owner Location Type of Contract Scope Compliance	DELL APCC1 Bayan Lepas Industrial Zone, Penang Facilities Maintenance Yearly renewal contract covering Data Center's CRAC, UPS, WLD, EMS, VESDA service, maintenance & hook-up FM Global Approved
	Owner Location Type of Contract Scope	Nippon Express Penang Facilities Maintenance Yearly renewal contract covering ACMV service, maintenance & hook-up
	Owner Location Type of Contract Scope	MMC-Gamuda KL Facilities Maintenance Yearly renewal contract covering Data Center's CRAC, UPS, WLD, EMS, VESDA service, maintenance & hook-up

	Owner Location Type of Contract Scope	Royal Thai Consulate Penang Facilities Maintenance Yearly renewal contract covering ACMV, & UPS service & maintenance
	Owner Location Type of Contract Scope	Flex Bukit Minyak, Penang Facilities Maintenance Service & Maintenance covering ACMV, Process Utility, service, maintenance & hook-up
	Owner Location Type of Contract Scope	VAT Batu Kawan Industrial Park, Penang Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, service, maintenance & hook-up
	Owner Location Type of Contract Scope	Motorola Bayan Lepas Industrial Zone, Penang Facilities Maintenance Yearly renewal contract covering Data Center's CRAC, UPS, WLD, EMS, VESDA service, maintenance & hook-up
	Owner Location Type of Contract Scope	Sanmina Bayan Lepas Industrial Zone, Penang Facilities Maintenance Yearly renewal contract covering Data Center's CRAC, UPS, WLD, EMS, VESDA service, maintenance & hook-up
	Owner Location Type of Contract Scope	Hacks Bukit Minyak, Penang Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, service, maintenance & hook-up

	Owner Location Type of Contract Scope	St Jude Medical Bayan Lepas Industrial Zone, Penang Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, service, maintenance & hook-up
	Owner Location Type of Contract Scope	Entegris Kulim Hi-Tech Park, Kedah Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, service, maintenance & hook-up
	Owner Location Type of Contract Scope	The Edison Hotel Penang Facilities Maintenance Yearly renewal contract covering ACMV service & maintenance
	Owner Location Type of Contract Scope	Abbott Kulim Hi-Tech Park, Kedah Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, service, maintenance & hook-up
	Owner Location Type of Contract Scope	Schawki Imaging by SGK Group Bukit Minyak Industrial Park, Penang Facilities Maintenance Yearly renewal contract covering Data Center's CRAC, UPS, WLD, EMS, VESDA service, maintenance & hook-up
	Owner Location Type of Contract Scope	Rembina Bayan Lepas Industrial Zone, Penang Facilities Maintenance Yearly renewal contract covering ACMV, Process Utility, service, maintenance & hook-up

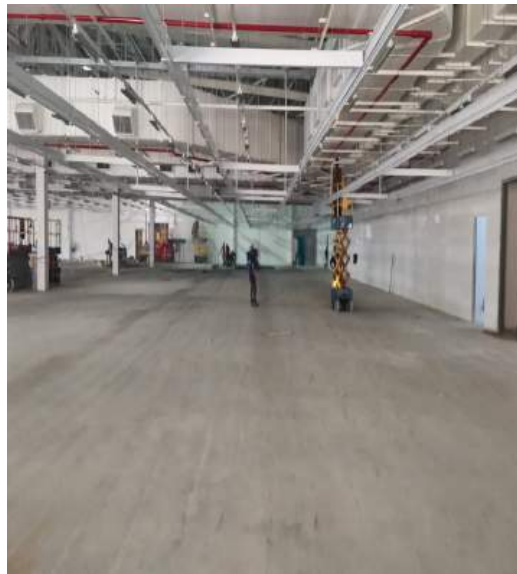
	Owner Location Type of Contract Scope	Jabil Circuit Bayan Lepas Industrial Zone, Penang Facilities Maintenance Service & Maintenance covering ACMV, Process Utility, service, maintenance & hook-up
	Owner Location Type of Contract Scope	Analog Devices Bayan Lepas Industrial Zone, Penang Facilities Maintenance Service & Maintenance covering ACMV, Process Utility, service, maintenance & hook-up

	call center – CSA, ID, MEP fit up client dell global business center – phase 4 location penang free industrial zone, malaysia year 2021 type of project retrofit contract amount RM5,000,000.00 scope 25,000ft2 office CSA/ID/MEP fit up standard fm approved
	semiconductor - MEP client analog devices sdn bhd – plant 3, 7-storeys main con rimbaco sdn bhd location penang free industrial zone, malaysia year 2021 type of project base build contract amount RM12,000,000.00 scope 3 x 400rt water cooled chiller, chw pumps, fm approved cooling tower c/w associated air side AHU/MAU/FCU, ducting & piping installation 2 (350kW + 200kW) oil free air compressor; 1 x vacuum pump c/w copper type L piping installation 20,000ft2 ISO8 cleanroom standard fm approved
	semiconductor - MEP client bcm electronics corporation sdn bhd main con kok construction sdn bhd location kulim hi-tech ark, kedah, malaysia year 2021 type of project base build contract amount RM3,000,000.00 scope 1 x 400rt water cooled chiller, chw pumps, cooling tower c/w associated air side AHU/MAU/FCU, ducting & piping installation cda piping installation & setup
	semiconductor - MEP client ni malaysia sdn bhd– new warehouse main con kok construction sdn bhd location penang free industrial zone, malaysia year 2021 type of project base build contract amount RM3,500,000.00 scope 50,000ft2 x 50ft height warehouse 2 x 175rt vfd air cooled chiller, chw pumps, cooling tower c/w associated air side AHU/MAU/FCU, ducting & piping installation standard fm approved

	semiconductor - MEP client micron memory malaysia sdn bhd – block 2 main con tialoc sdn bhd location batu kawan, penang, malaysia year 2021 type of project base build contract amount RM45,500,000.00 scope iso8 cleanroom chw piping installation 150 nos crac c/w installation bms instruments & sensor c/w installation
	semiconductor - MEP client sustio sdn bhd main con tialoc sdn bhd location batu kawan, penang, malaysia year 2021 type of project base build contract amount RM5,000,000.00 scope acmv & process utilities piping installation

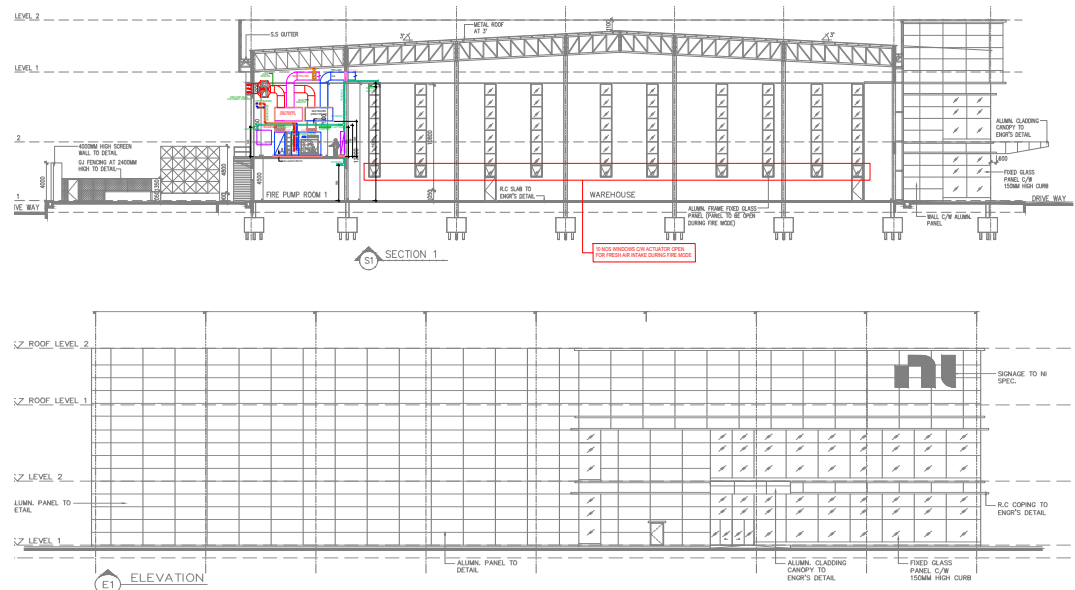
semiconductor - MEP

client	bcm electronics corporation sdn bhd – plant 2
main con	kok construction sdn bhd
location	kulim hi-tech ark, kedah, malaysia
year	2021
type of project	base build
contract amount	RM3,000,000.00
scope	1 x 400rt water cooled chiller, chw pumps, cooling tower c/w associated air side AHU/MAU/FCU, ducting & piping installation cda piping installatiomn & setup



semiconductor - MEP

client	ni malaysia sdn bhd– new warehouse
main con	kok construction sdn bhd
location	penang free industrial zone, malaysia
year	2021
type of project	base build
contract amount	RM3,500,000.00
scope	50,000ft2 x 50ft height warehouse 2 x 175rt vfd air cooled chiller, chw pumps, cooling tower c/w associated air side AHU/MAU/FCU, ducting & piping installation
standard	fm approved



call center – CSA, ID, MEP fit up

client	dell global business center – phase 4
location	penang free industrial zone, malaysia
year	2021
type of project	retrofit
contract amount	RM5,000,000.00
scope	25,000ft2 office CSA/ID/MEP fit up
standard	fm approved



semiconductor - MEP

client	analog devices sdn bhd – plant 3, 7-storeys
main con	rimbaco sdn bhd
location	penang free industrial zone, malaysia
year	2021
type of project	base build
contract amount	RM12,000,000.00
scope	3 x 400rt water cooled chiller, chw pumps, fm approved cooling tower c/w associated air side AHU/MAU/FCU, ducting & piping installation 2 (350kW + 200kW) oil free air compressor; 1 x vacuum pump c/w copper type L piping installation 20,000ft2 ISO8 cleanroom
standard	fm approved



semiconductor - MEP

client micron memory malaysia sdn bhd – block 2
main con tialoc sdn bhd
location batu kawan, penang, malaysia
year 2021
type of project base build
contract amount RM45,500,000.00
scope iso8 cleanroom chw piping installation
 150 nos crac c/w installation
 bms instruments & sensor c/w installation



semiconductor - MEP

client sustio sdn bhd
main con tialoc sdn bhd
location batu kawan, penang, malaysia
year 2021
type of project base build
contract amount RM5,000,000.00
scope acmv & process utilities piping installation

