COLT

ENGINEERING

PROFILE / 2018

" We Serve
to Save

Fire Protection System
Smoke Control System
Smoke Spill System
Gas Detection System

COMPANY INFORMATION

FINANCIAL INFORMATION

Authorised Capital	RM5,000,000.00
Paid-up capital	RM1,000,000.00

AWARDS 2017

International Prestige Brand Award
(Brand of the Year Awards 2017)

Platinum Business Awards 2017
(SME Service Excellence Award)

CERTIFICATION

CIDB : G7 ME 02
ISO 9001 : 2008

PENANG FACTORY
No.1, Lorong Saga Jaya 5,
Taman Perindustrian Saga Jaya,
13600 Perai, Penang.

E : colt.prai@coltfire.com

PENANG MAIN OFFICE
C-21-1, Persiaran Bayan Indah,
Bayan Bay, 11900 Sg. Nibong,
Penang.

T : +604 644 8888
F : +604 644 3333
E : enquiries@coltfire.com

KEDAH OFFICE
132, Persiaran 6, Kulim Avenue,
Kulim Hi-Tech Park,
09000 Kulim, Kedah.

T : +604 402 6088
E : colt.kulim@coltfire.com

KUALA LUMPUR OFFICE
B-G-19, Block B,
Merchant Square Tropicana,
No.1, Jalan Tropicana Selatan 1,
47410 Petaling Jaya, Selangor.

T : +603 7610 2030
F : +603 7887 9833
E : colt.kl@coltfire.com

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CORPORATE OVERVIEW

OUR PROUD HISTORY

Established in the year 1989, the renowned **Colt Engineering Sdn Bhd** was one of the pioneers in fire safety solutions in the Malaysian market.

Servicing various corporations all over the nation throughout the years with passion and dedication, our brand has become synonymous to fire prevention and suppresion systems. To name a few, Sony, Motorola, B-Braun, Infineon and OSRAM are our clients who have tasted satisfaction.

Beside being a member of the Malaysian Fire Protection Association and Institution of Fire Engineers, we are also certified under ISO 9001 :2008, reiterating our quality as one of the best solutions provider. It is the kind of trust from them that puts us where we are today, the industrial leader in what we do best - providing peace of mind to our clients.

COLT ENGINEERING SDN BHD AT PRESENT

The company's core business lies in providing holistic solutions for the following systems:

1. Fire Protection System
We provide consultation, design, supply & installation, test & commissioning, maintenance and after sales services. The systems used in Colt Engineering are compliant with CIFS, LPC, NFPA and FM Standards, catering to residential & commercial buildings, as well as industries that particularly require higher protection such as the oil and gas, petrochemical and power generation.

As a value-added partner of Siemens (Germany), a brand that emphasizes strongly on building technologies and solution, we are the authorized distributor for Siemens's wide range of addressable fire alarm systems and VESDA aspirating smoke detection systems.

2. Smoke Spill & Smoke Control System & Architectural Solutions
We collaborate closely with our principal, Colt International (UK)'s regional office in Singapore to design, supply and install smoke control system and architectural solutions ranging from smoke curtains to mechanical & natural ventilators, and Performance Rain Defence louvres. All Colt louvre panel systems have been tested to EN 13030:2001.
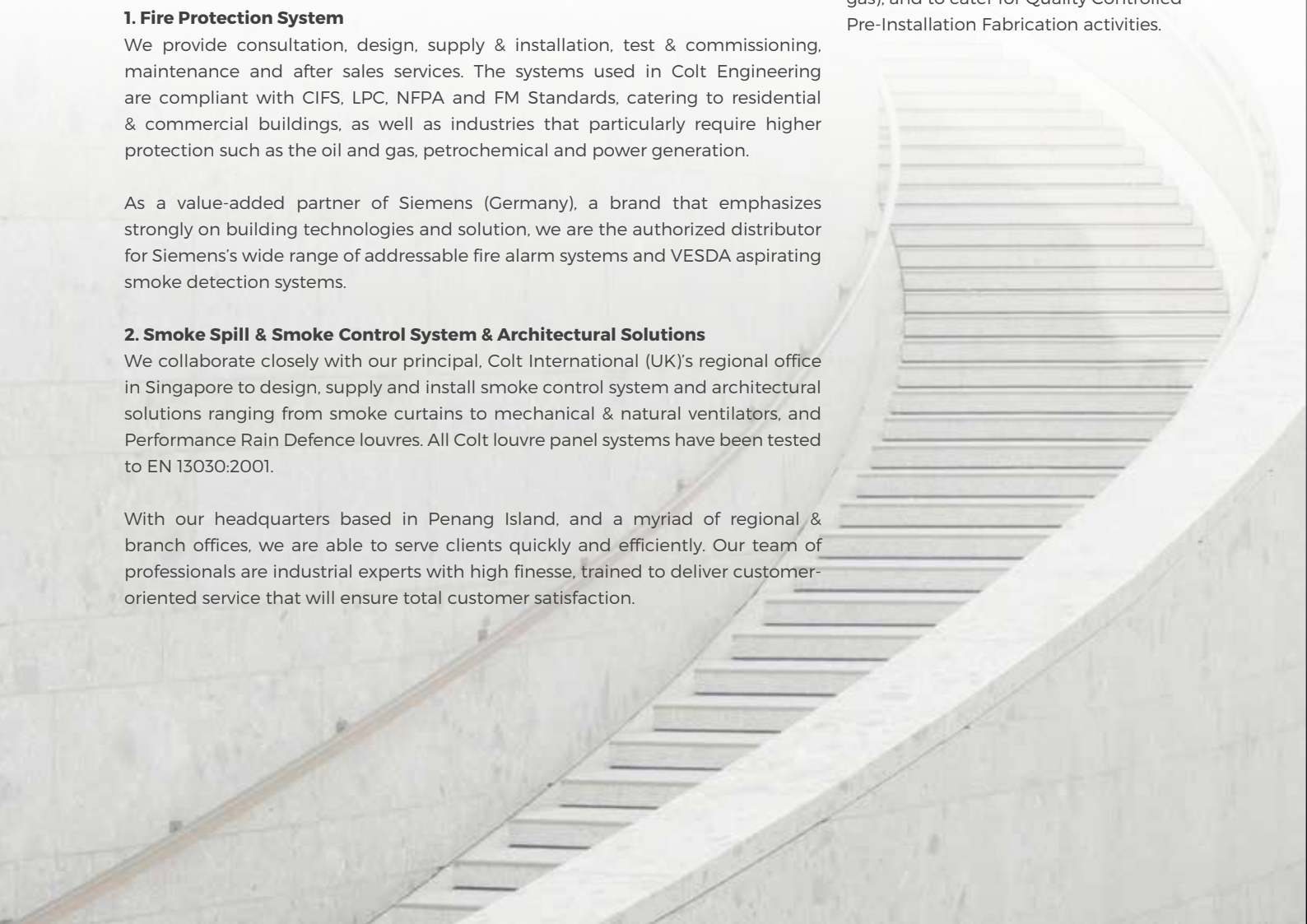
With our headquarters based in Penang Island, and a myriad of regional & branch offices, we are able to serve clients quickly and efficiently. Our team of professionals are industrial experts with high finesse, trained to deliver customer-oriented service that will ensure total customer satisfaction.

ENROUTE TO THE FUTURE

Future directions have steered Colt Engineering to diversifying its products in our effort to satiate the ever-demanding market.

In 2018, we have added Fixed Gas Suppression System (Sinorix) by Siemens products. We have also been appointed as 3M (US) Oldham SAS's sales agent and spare part distributor for its commercial Gas Detection System line of products.
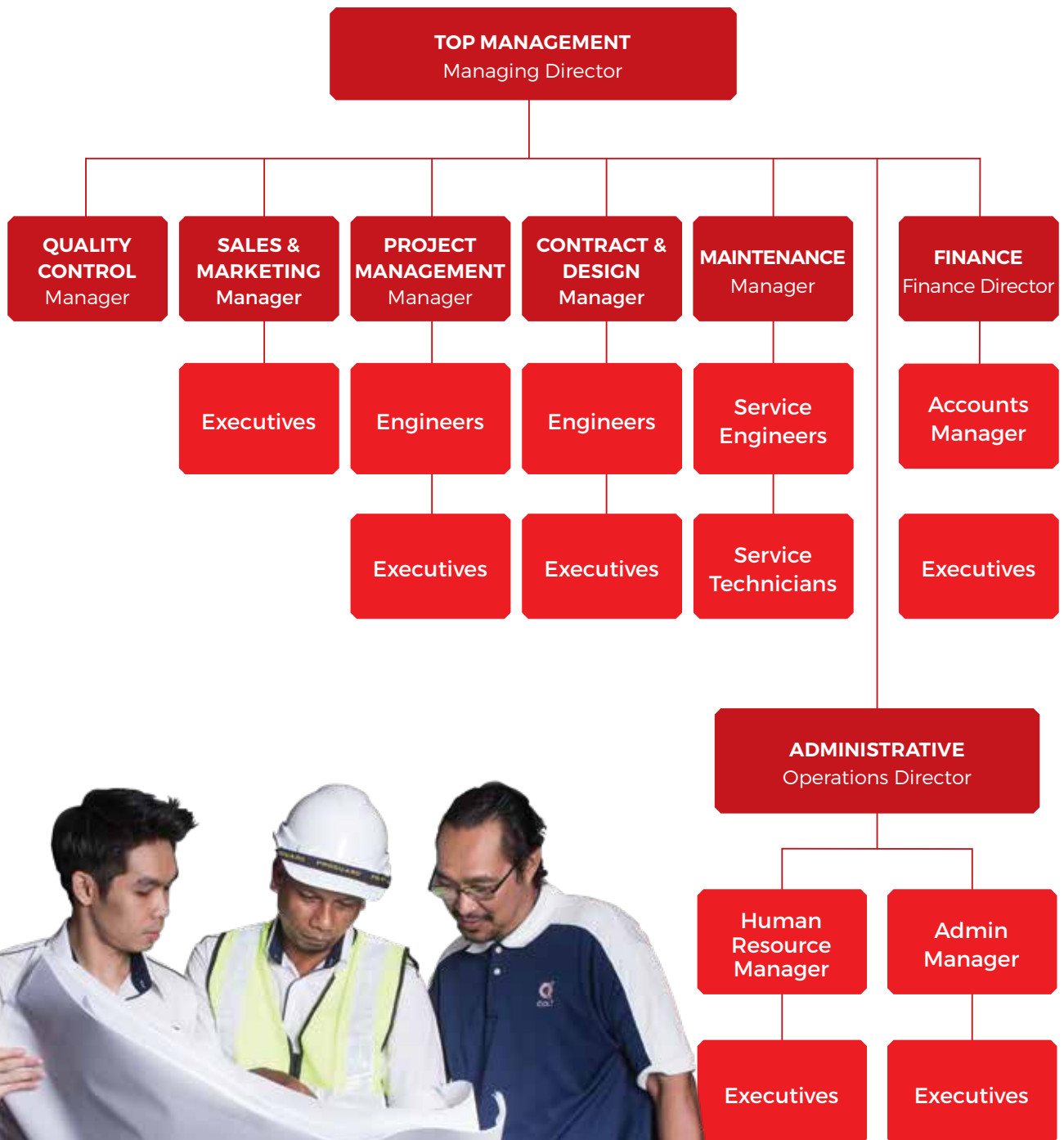
On top of that Colt Engineering has acquired a factory in Prai Industrial Area to serve as a refilling station for Siemens Sinorix 1230 (3M Novec 1230 patented gas) and Sinorix 227 (FM200 gas), and to cater for Quality Controlled Pre-Installation Fabrication activities.

CORPORATE STRUCTURE

COLT GROUP MALAYSIA

COLT ENGINEERING SDN BHD

TOP MANAGEMENT
Managing Director

QUALITY CONTROL Manager

SALES & MARKETING Manager

PROJECT MANAGEMENT Manager

CONTRACT & DESIGN Manager

MAINTENANCE Manager

FINANCE Finance Director

Executives

Engineers

Engineers

Service Engineers

Accounts Manager

Executives

Executives

Service Technicians

Executives

ADMINISTRATIVE
Operations Director

Human Resource Manager

Admin Manager

Executives

Executives

CORPORATE STATEMENTS

OUR MISSION

Professionalism and credibility are our woven into our very souls, and served as the principles that upheld the company through thick and thin over the years. When it comes to the brand **Colt Engineering**, reliability was never in doubt.

OUR VISION

To be the finest comprehensive fire safety solutions provider in the nation and beyond to integrate value and protection in our effort to safeguard the welfare of our clients and society at large.

OUR COMMITMENT

In "Delivering Distinction", we commit only standards par excellence. In terms of products or services, our clients, consultants, contractors and suppliers can expect nothing less than competency and integrity. Value comes before all else. Your satisfaction is our pride.

QUALITY

Always striving ta go one step further in our effort to ensure uncompromised quality, customer satisfaction always tops our priority list. Superiority, cost effectiveness and after-sales support form the fundamentals of our corporate aptitude.

TECHNOLOGICAL ADVANCEMENT

Highlighting unremitting advancements in terms of efficiency and design of our products and services through adoption of global technological advancements.

We Serve To Save

FOUNDER

> ❝
> ## I am most delighted that we stood cream of the crop in a highly competitive market...

TEE SIEW CHONG
Founder of Colt Engineering Sdn Bhd
Keynote From Managing Director

Mr Tee, a Malaysian, founder of **Colt Engineering Sdn Bhd**, graduated with a Masters of Science (UPM), a registered corporate member of Institute of Fire Engineers (UK), Institute of Master In Disaster Emergency Management Malaysia, member of NFPA, SFPE of USA, a Central Committee and Exco Member of Malaysia Fire Protection Association (MFPA) 2003-2018 also representing the association in SIRIM technical sub-committee working group for drafting of Malaysia Standard (MS) for several fire equipment and system. Mr Tee constantly went to trainings and international seminars to get himself updated on the latest products and technologies over 38 years of working experience in the Safety and is an expert in project implementation and project system design.

" The Fire Safety Industry is a very professional field which requires high finesse in an environment of high technology, and I most delighted that we stood cream of the crop in a highly competitive market. This celebrated achievement goes down to the ever burning fire within. This passion serves as a dynamo that propels us to great heights and testimony In the pipeline we are looking at diversification of our products range to better serve our clients. I am giving my unwavering commitment to all our value clients and my fellow compatriots that we shall continue to make every effort work and make every effort count in our road to be the numero uno in the industry. Let there be peace amongst all."

Love and dedication,
Tee Siew Chong

PRODUCTS & SERVICES

We Offer
Great Services!

- Fire Alarm and Detection System
- Total Flooding and Suppression System
- UV / IR Fire Detection System
- Firemen Intercom System
- Hydrant System
- Hosereel System
- Foam System
- Wet Riser / Dry Riser System
- Sprinkler System
- Vesda System
- Smoke Spill System
- Fire Fighting Pump System
- Gas Detection System
- Smoke Control System

✓ **Fire Extinguisher Refiling Services
BOMBA Inspection & Certification**

✓ **Yearly / Half Yearly / Quarterly / Monthly
Service / 24 Hour On-Call Service**

BUSINESS IDEOLOGY

Colt Engineering thrives under the rapid growth in our industry because of our strong business ideology. We champion the fire safety services like no other, when we implement our four prong services - Project Consultancy & Installation, Trading of Products, Project System Maintenance, and General Fire Extinguisher Servicing.

Already a leader in the trading of mechanical and electrical equipments, professional installation and architectural design, **Colt Engineering** is also famed for its holistic system maintenance and equipment servicing. We placed high importance on after sales services, as we intend to prevent our valued clients from experiencing any unwarranted hassle out from the consequences of negligence in that area.

Colt Engineering is a brand synonym to care and responsibility. We want you to enjoy protection in the luxury of convenience. We built our business on a platform of love and dedication, not just on numbers and profitability. To elevate customer experience we have also incorporated a devoted team to the Customer Relationship Management complete with real time software. All our effort to ascertain physical and emotional fulfillment form the basis of our strong fire safety credentials.

UNIQUE SELLING POINT

UNIQUE SELLING POINT Being the leader of the chasing pack is already a recognition beyond the ordinary. Serving our clients avidly over 28 years has put us where we are today, and not many could actually emulate that feat. This also means that there are certain things that only Colt Engineering could offer the unique business proposition undertaking the high-tech Smoke Control system (incorporating the Smoke Curtain, Natural & Mechanical Ventilators) and Rain Defence Performance Louvres, with a direct partnership with Colt International (United Kingdom).

Our capacity brought us to another milestone with the signing of business collaboration with Siemens (Europe's largest German based multinational engineering and electronics conglomerate). Formally registered as the "Solutions Partner of Siemens", Colt Engineering implements Siemens technology in all our projects on a very competitive price. We are also Siemens Sinorix 1230 (3M Novec 1230 patented gas) and Sinorix 227 (FM200 gas) refilling solutions provider with our newly set up plant in Prai, Penang, the Silicon Valley of Malaysia.

CERTIFICATIONS & AWARDS

OUR TEAM OF EXPERTS

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With the best people, we can promise the best service for our clients...

Colt Engineering's successful history in providing one-stop solutions for fire prevention and suppression system, especially for high hazardous industries such as Chemical and Petrochemical, Power Generation, Hazardous Waste, Pharmaceutical and Biotech, Pulp and Paper Industries calls for erudite and highly competent team of engineers and executives.

Our goal is to recruit and retain the best talent at all levels of the organization. We know that with the best people, we can promise the best service for our clients. Our team of engineers and executives undergo regular trainings to update and equip ourselves with the latest technological knowledge and best professional practices.

We are also strongly supported by worldwide principals, Colt International (UK), Siemens (Germany), and 3M (US) in high-tech products, superior quality standards and renown technological know-how, consequently meeting all approval criteria.
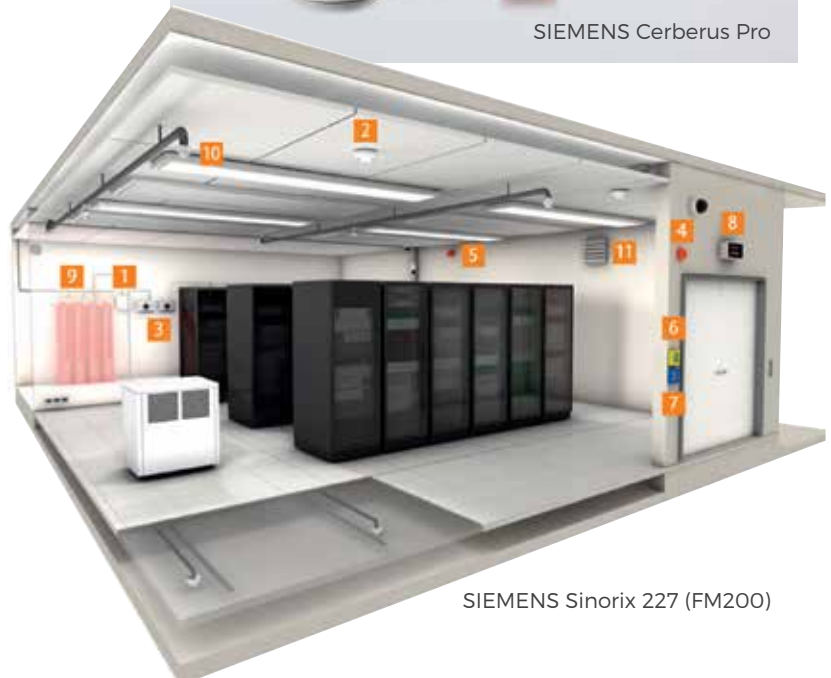
OUR BUSINESS PARTNERS

SIEMENS

Siemens is a German multinational engineering and electronics conglomerate company headquartered in Berlin and Munich. It is Europe's largest engineering company and maker of medical diagnostics equipment. Siemens's principal activities are in the fields of industry, energy, transportation and healthcare. It is organized into four main divisions: Industry, Energy, Healthcare, and Infrastructure and Cities. Siemens and its subsidiaries employ around 360,000 people across nearly 190 countries and reported global revenue of approximately €78.3 billion in 2012.

SIEMENS Cerberus Pro

SIEMENS Sinorix 227 (FM200)

OUR BUSINESS PARTNERS

Colt is present around the world through locally staffed companies and strategic partners backed by a global organisation. This means that our local teams are able to support customers with the best Colt expertise and first-hand knowledge of local conditions, regulations and practices. Colt International Ltd is based in Havant, Hampshire and has a regional office in Glasgow. Our innovative approach and technical expertise enable us to develop unique solutions with the backing of our own R&D and manufacturing facilities.

COLT Apollo ATI

Colt Smokemaster SM5

SIEMENS

SINORIX 1230

QUICK, SAFE AND ENVIRONMENTALLY FRIENDLY

Keep fire virtual. With intelligent extinguishing solution from SIEMENS

Sinorix 1230 – intelligent solution for fast and safe extinguishing

Sinorix 1230 reacts rapidly with superior extinguishing properties – protecting valuable assets and ensuring extinguishing without negative impact on the environment.

ADVANCED EXTINGUISHING SOLUTION

Sinorix™ 1230 is an excellent solution for the protection of high-value assets, business processes and people. It is based on the environmentally friendly extinguishing agent 3M™ Novec™ 1230 Fire Protection Fluid. The high-pressure technology from Siemens allows highest design flexibility and the realization of single-sector and multi-sector systems. Enabling rapid, safe and automated interventions, Sinorix 1230 can prevent loss of data and secure business continuity.

MOST EFFECTIVE FOR SMOLDERING FIRES

Sinorix 1230 is an effective and clean extinguishing solution that is ideally suited to extinguish smoldering fires. It causes neither damage to nor leaves any residue on sensitive equipment. This makes it the perfect choice for eliminating electrical and electronic risks.

FAST, HIGHLY EFFECTIVE AND ECONOMICAL

The high efficiency of the Sinorix 1230 system allows using a low extinguishing concentration. Novec 1230 fluid even offers the lowest extinguishing concentration of all currently authorized extinguishing agents. Therefore, compact system designs are possible and less space is needed for installation and cylinder storage.

HARMLESS FOR PEOPLE AND ASSETS

The Novec 1230 fluid is non-corrosive and non-conductive, which means it does not damage high-value assets such as delicate electronics. It is also harmless to people's health. This makes the Novec 1230 fluid ideal for spaces that are normally or occasionally occupied. The agent is also nontoxic, non-flammable and non-explosive.

INNOVATIVE AND ENVIRONMENTALLY FRIENDLY

The innovative Novec 1230 fluid is safe, effective and not subject to regulatory restrictions or phase-out. The Novec 1230 fluid has zero ozone depletion potential (ODP), a short atmospheric lifetime (ALT) of 3 - 5 days and a low global warming potential (GWP) of 1, making it exempted from restrictions of so-called "greenhouse gases" imposed by the Kyoto Protocol. This makes Novec 1230 fluid an innovative, clean and future-proof solution. Sinorix 1230 with the Novec 1230 fluid follows EN standards and guidelines and is backed by appropriate certifications such as VdS, CNPP and others.

ANSWERS FOR INFRASTRUCTURE AND CITIES

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority - and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

Pappas Group
Headquarters, Austria
Sinorix 1230 protects server rooms at the corporate headquarters effectively and sustainably - harmless to people and sensitive assets.

VESDA by **xtralis**

ASPIRATING SMOKE DETECTION (ASD)

The World's No.1 ASD Brand

VESDA very early warning smoke detection solutions provide the earliest possible warning of an impending fire hazard. VESDA buys time to investigate an alarm and initiate an appropriate response to prevent injury, property damage or business disruption. And because VESDA has the industry's widest sensitivity range and multi-level alarms, even minute levels of smoke can be detected before a fire has time to escalate.

As the No. 1 ASD brand specified by fire professionals around the world, VESDA is synonymous with reliable, high-performance fire detection.

HOW VESDA WORKS

VESDA works by continuously drawing air into a distributed pipe network via a high-efficiency aspirator. The air sample then passes through a dual-stage filter. The first stage removes dust and dirt from the air sample before it enters the laser detection chamber. The second, ultra-fine stage provides an additional clean-air supply to keep the detector's optical surfaces free from contamination, ensuring consistent absolute detection and long detector life as well as minimizing nuisance alarms.

From the filter, the air sample goes through the detection chamber where it is exposed to a laser light source. When smoke is present, light is scattered within the detection chamber and is instantly identified by the highly sensitive receiver system. The signal is then processed and presented via a bar-graph display, alarm threshold indicators and/or graphic display. VESDA detectors are able to communicate this information to a fire alarm control panel, a software management system, or a building management system via relays or a High Level Interface (HLI).

PRODUCT RANGE

VESDA VLS
The VESDA VLS locates the origin of smoke by identifying the sector (pipe) with the highest level of smoke and then continues to sample air from all sectors to monitor fire growth.

VESDA VLP
The VESDA VLP detects fire at the earliest possible stage and reliably measures very low to extremely high concentrations of smoke.

VESDA VLC
VESDA VLC offers protection for small to medium areas that require costeffective very early warning.

VESDA VLF
The VESDA VLF delivers advanced and cost-effective very early warning for small environments.

ACCESSORIES

REMOTE DISPLAYS AND PROGRAMMERS

The VESDA display module monitors and reports the status of a detector, providing visual representation of smoke levels along with all alarm and fault conditions. The menu-driven VESDA Programmer allows the user to conveniently configure, commission and maintain the VESDA system, as well as program each individual detector.

VESDANET™

VESDAnet is a comprehensive, fault-tolerant, "closed," two-wire communications loop that links VESDA detectors, displays, programmers and remote relay modules on a daisychained loop. VESDAnet enables a number of units to be programmed together from one or more locations and automatically detects communication failures.

VESDA PIPE

A key element in the performance of a VESDA ASD system is the sampling pipe network that actively transports air from the protected area to the detector. VESDA offers an extensive range of pipe and fittings to suit all application needs, ensuring a quality system is installed every time.

SOFTWARE

XTRALIS VSM4™

The VSM software package allows the user to monitor, configure and control a VESDA system from a central location via a VESDAnet communication loop or directly to VESDA detectors. Real-time and historical events for a single detector or multiple networks of detectors can be collected over a local- or wide-area network. The data then can be processed and presented in either report or graphical format - even graphically on site floor plans.

XTRALIS VSC™

The VSC software package can be used to configure, commission and maintain VESDA detectors. The software provides high-level programming flexibility through its on-line and off-line configuration capabilities. Rapid diagnostic abilities, concurrent configuration views, compare/merge functionality, and simultaneous smoke-trend graphing of multiple detectors are other standard features designed to simplify operation and installation setup.

VESDA ASPIRE2™

VESDA ASPIRE2 is the latest version of VESDA sampling pipe network design and modeling software. It aids in the design and evaluation process for basic to very complex pipe-network layouts. Key features, such as design wizards, 3-D isometric views, an automated design verification process, and a new AutoBalance capability, ensure that a tailored pipe layout is easily achieved. The Installation Data Pack (IDP) generates a series of reports with parameters, required materials and expected system performance so installation and commissioning engineers receive this information clearly.

VESDA VLQ

The VESDA VLQ detector is a cost-effective ASD solution that meets the unique needs of numerous small area applications of up to 100m2 (1,000 sq.ft.).

VESDA VFT

The VESDA VFT is a unique and versatile high-sensitivity ASD that is capable of pinpointing the source of incipient smoke to speed response, enhance investigation, and minimize business disruption and downtime.

VESDA VLI

The VESDA VLI is an industry first early warning aspirating smoke detection system, designed to protect industrial applications including mining, manufacturing, power generation facilities, waste treatment plants and more up to 2000 m2 (20,000 sq. ft.).

VESDA VLC-EX

The VESDA VLC-EX detector has been specifically designed to provide all the benefits of aspirating smoke detection, including very early warning, for the protection of hazardous applications with Zone 2 classification.

COLT

SMOKEMASTER SM5

Smoke containment systems prevent the movement of smoke and heat from one area to another. These often take the form of physical barriers such as smoke curtains. Smoke curtains are generally used either to create a smoke reservoir by containing and limiting the travel of smoke, channel smoke in predetermined direction or to prevent or retard smoke entry to another area or void.

Movable (as opposed to fixed) smoke curtains may be used where a fixed smoke curtain might be either impractical or aesthetically unacceptable.

The curtain comprises a flexible, heat resistant fabric, which is impervious to smoke and hot gases, wound round a circular tube. The tube contains an electric motor which holds the curtain retracted at ceiling level, and which unrolls the fabric automatically upon a signal from a fire detection system. bottom bar is fitted to the bottom edge of the fabric to keep it taut and provide a suitable finish when the curtain is retracted.

The curtain material is 0.4 mm thick glass fibre with a weight of 455 g/m².

3M Science. Applied to Life.™

FIXED
Gas Detectors (for light industry / commercial)

3M™ OLDHAM OLC 10/OLCT 10
Designed to detect combustible gases and exhaust gases
- Up to two OLC 10s per channel
- Up to five OLCT 10s per channel
- Wheatstone bridge or 4-20 mA output (OLCT 10)

The OLC 10 and OLCT 10 are designed to detect combustible or toxic gases for tertiary applications (boiler plants, battery charging rooms, car parks, hospitals). Two OLC 10s can be connected to one detection channel to monitor the same area, without an additional junction box or extra wiring. Similarly, up to five OLCT 10s can be connected to one channel for the detection of CO, NO or NO2 in a car park application.

Gases Detected : combustible, toxic and refrigerant (Methane, Propane, Butane, Hydrogen, LPG, LNG, CO, NO, NO2 and Freons)
Sensor Technologies : Catalytic, Electrochemical or Semi-Conductor
Power In/Output : 18-32VDC/ 0-20 mA, HART
Approvals : CE · ATEX 3G (except Semi-Conductor version)

3M™ OLDHAM OLCT 10N
Designed to detect oxygen and the most common combustible or toxic gases
- Up to two OLC 10s per channel
- Up to five OLCT 10s per channel
- Wheatstone bridge or 4-20 mA output (OLCT 10)

OLCT 10N is a digital detector compatible with the MX 32 and MX 43 controllers. It is possible to connect up to eight OLCT 10Ns to one MX 32 and up to thirty two OLCT 10Ns to one MX 43. Calibration using a standard gas is semi-automatic. It can be done by just one person without opening or adjusting the housing.

Gases Detected : Methane, Propane, Butane, Hydrogen, LPG, O2, CO, CO2, H2S, NH3, NO, NO2
Sensor Technologies : Catalytic, Infrared or Electrochemical
Approvals : CE · ATEX 3GD · IECEx · EAC

3M™ OLDHAM CTX 300
Designed to detect toxic gases or oxygen in areas not classified as having an explosion risk
- 4-20 mA output transmitter with optional backlit display
- 2-wire power supply option (electrochemical version)

The CTX 300 is designed to detect toxic gases or oxygen in areas not classified as having an explosion risk in the industrial or tertiary sectors. The CTX 300 is equipped with sensors that are pre-calibrated at our factory, facilitating maintenance and more specifically sensor replacements.

Gases Detected : more than 30 toxic gases, O2, CO2, VOCs, Freons
Sensor Technologies : Infrared, Electrochemical or Semi-Conductor
Power In/Output : 15-32 Vcc
Approvals : CE · CSA · EAC

FIXED
Gas Detectors (for light industry / commercial)

3M™ OLDHAM CAR PARK SYSTEM (CPS)
Designed to detect combustible gases and exhaust gases in car parks and tunnels
- Up to 256 detectors, 64 logic inputs and 256 relays per system
- Automatic ventilation control

The CPS (Car Park System) gas detection unit uses a fieldbus and can support up to 256 detectors and just as many relays connected in a network across 8 different lines. Up to 1,000 times faster than a pump system, the CPS is safer and provides optimal management of the ventilation while considerably reducing energy consumption. It has an easy to use interface consisting of a large LCD screen displaying measurements in real time, 3 LED lights and icons indicating the status of the system (Operation, Forced Operation, Fault, Alarm, Low Speed, High Speed, etc.).

Gases detected : Methane, Hydrogen, LPG, VNG, CO, NO, NO2
Technology : Catalytic or Electrochemical
Power supply : 85-260 Vac
Outputs : Relays, RS485 Modbus RTU
Certifications : CE · VDI 2053

ALARM
Stations

3M™ OLDHAM SURVEYOR 4B
Single-channel controller without display
- Economical solution for small units (boiler plant, battery charging room)
- 2 programmable alarm thresholds

The Surveyor 4B is a single-channel controller designed to detect combustible gases in boiler plants, battery charging rooms and more generally in small units that need one or two detectors. It has two different alarm thresholds and built-in relays. It can be easily mounted to a DIN rail.

Input : Wheatstone Bridge sensor
Outputs : 2 relays (1 common gas and fault, 1 gas)
Power supply : 11.5 to 14 Vcc or 207 to 242 Vca
Indicators : Built-in audible and visual alarms
Certifications : CE

3M™ OLDHAM MX 15
Single-channel controller with display
- Ideal for small units
- Compatible with any 4-20 mA detector
- 2 programmable alarm thresholds

The MX 15 is a single-channel controller designed for use in boiler plants and tertiary applications. The MX 15 controller is economical and very easy to use, and includes three built-in relays. It can be mounted on a wall or DIN rail.
Inputs : 4-20 mA, Wheatstone Bridge
Outputs : 3 relays (1 fault, 2 gas alarms)
Power supply : 21-30 Vcc and 230 Vca or 115 Vca
Indicators : Built-in audible and visual alarms
Certifications : CE · ATEX metrology · EAC

ALARM
Stations

3M™ OLDHAM MX 43

Controller with 4 to 8 detection channels
- Up to 32 analog or digital detectors
- 5 programmable alarm thresholds per channel
- OR, AND, NAND, VOTING logic for alarm
- USB data logging

The MX 43 is a digital and analog controller designed for measuring gases in the atmosphere and more generally for processing any 4-20 mA analog or compatible on/off digital signal. Up to 32 detectors can be distributed on its 8 lines for increased cost savings. The MX 43 is SIL1-certified and accepts different modules (analog inputs, relay outputs, compatible logic input, analog outputs) that can be installed at a distance of up to several hundred meters for increased system capacity and flexibility. It is available in wall-mounted version and 19"-rack-mounted version.

Inputs : 4-20 mA, digital, Wheatstone Bridge
Outputs : 6 built-in relays and up to 24 external relays, 4-20 mA, RS485 Modbus RTU
Power supply : 22 to 28 Vcc and 100 to 240 Vca, optional embedded backup battery
Indicators : Built-in audible and visual alarms, optional additional alarm kit
Certifications : CE · ATEX metrology · EAC · MED · SIL1

3M™ OLDHAM MX 52

Controller with 2 to 16 detection channels
- 3 programmable alarm thresholds per channel
- Standard 19" 3U format
- SIL2-certified

The MX 52 controller allows the connection of up to 16 analog or Wheatstone Bridge detectors. The device can be programmed from the front panel or using a computer. The MX 52 controller is as safe as it is reliable, and has SIL2 certification. It has one 4-20 mA output per channel, two alarm relays per channel, one general alarm relay and one fault relay.

Inputs : 4-20 mA, Wheatstone Bridge
Outputs : 34 relays (1 common gas, 1 common fault, 32 gas), 4-20 mA, RS485
Power supply : 21 to 31 Vcc and 207 to 244 Vac or 103 to 122 Vac
Indicators : Built-in audible and visual alarms
Certifications : CE · ATEX metrology · EAC · SIL2

3M™ OLDHAM MX 32

Single- or dual-channel controller with display
- Up to 8 analog or digital detectors
- 5 programmable alarm thresholds per channel
- OR, AND, NAND, VOTING logic for alarm
- Data logging

The MX 32 is a digital and analog controller designed for measuring gases in the atmosphere and more generally for processing any 4-20 mA analog or compatible on/off digital signal. Up to 8 detectors can be distributed on its 2 lines for increased cost savings. The MX 32 accepts different modules (analog inputs, relay outputs, logic inputs, analog outputs) that can be installed at a distance of up to several hundred meters for increased system capacity and flexibility.
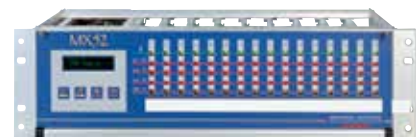
Inputs : 4-20 mA, digital, Wheatstone Bridge
Outputs : 5 built-in relays and up to 16 external relays, 4-20 mA, RS485 Modbus RTU
Power supply : 22 to 28 Vcc or 100 to 240 Vca
Indicators : Built-in audible and visual alarms, optional additional alarm kit
Certifications : CE · ATEX metrology (in progress) · EAC · SIL1 (in progress)

CLIENTELE

We are an experienced fire protection company that promises not only excellent customer service but reliablility. Our customer base includes multinational companies especially high risk industries. Our extensive experience in this field ensure efficiency, competency and reliable delivery of all our products and services.

PROJECT REFERENCES

We are an experienced fire protection company that promises not only excellent customer service but reliablility. Our customer base includes multinational companies especially high risk industries. Our extensive experience in this field ensure efficiency, competency and reliable delivery of all our products and services.

ONGOING PROJECTS

Rapid Petronas Package 14A at Johor
Smoke Control System
RAPID is PETRONAS' largest green-field downstream undertaking in Malaysia. RAPID PETRONAS PACKAGE 14A involved the engineering, procurement, construction and commissioning (EPCC) of workers village and temporary construction facilities for the utilities, interconnecting and off-site (UIO) facilities for Petroliam Nasional Bhd's (Petronas) Rapid project in Pengerang, Johor. The site is expected to be completed by 2018.

ONGOING PROJECTS

PPA1M BY JL99, Kepong
Fire Fighting System
The 1Malaysia Civil Servants Housing (PPA1M) latest project launched in 2016, is located in Kepong. The project is expected to be completed by 2018. For the 8.2acre PPA1M Metropolitan Kepong, which is being developed by JL99 Group, upon completion will come with two apartment blocks with a total of 1,230 homes.

MELAWATI MALL BY SIME DARBY & CAPITALAND, Kuala Lumpur
Smoke Control System
Melawati Mall is jointly developed by CapitaLand Malls Asia Limited and Sime Darby Property. The project located in Taman Melawati, an established and affluent residential district adjacent to the residential areas of Taman Melati, Wangsa Maju, Bukit Antarabangsa, Taman Permata and Kemensah Heights. The site was completed in 2017.

SETIA SKY VILLE , Penang
Fire Fighting System
Setia Sky Ville, one of the most anticipated development by SP Setia, designed to be the new benchmark in luxurious island living, located in the heart of Jelutong, Penang island. The 33-storey high towers launched in 2016, with construction scheduled to complete in 2020.

TROPICANA 218 MACALISTER ,
Penang
Fire Fighting System
Tropicana 218 Macalister is being developed by Tropicana Macalister Avenue (Penang) Sdn. Bhd., a member of Tropicana Corporation Bhd. The project is an integrated mixed development located in Penang's historic UNESCO World Heritage-listed capital city, George Town. Fronting the shady Macalister Road and set for completion in 2018.

ONGOING PROJECTS

THE RAINZ BY EXSIM GROUP , Bukit Jalil

Fire Fighting System

The Rainz is one of the green-based developments by Exsim Group. The project is situated in Bukit Jalil and expected to complete by 2018. It compromises an exclusive three-tower, 35-storey condominium. The Rainz focus on green living, also create an impression of exclusivity and privacy with its ample open spaces and well-thought public space planning.

SUNWAY VELOCITY MEDICAL CENTRE , Cheras
Fire Fighting System

Sunway Velocity Medical Centre is a new comprehensive tertiary hospital development with the following facilities. The hospital portion will have a built-up area of approximately 328,000 sqft. The project is under construction in Sunway Velocity, Cheras and is expected to open in 2019. The addition of the new tower E will set Sunway Medical Centre as one of the foremost private medical centres in Southeast Asia.

LEGEND HEIGHTS BY JL 99 , Sri Segambut
Fire Fighting System

The Legend Heights which developed by JL99 Group is slated for completion by mid-2020. The project will feature twin-tower of 40-storey blocks with high serviced apartment. Located on a 2.91-acre leasehold site in the heart of Taman Sri Segambut, Legend Heights is the first high-rise serviced residential development in the vicinity.

ONGOING PROJECTS

FOUR SEASONS RETAIL MALL ,
Kuala Lumpur, Smoke Control System
Four Seasons Hotel Kuala Lumpur, currently Malaysia's second tallest skyscraper after the Petronas Twin Towers, is set to open in 2018. The hotel is part of the RM3 billion 65-storey Four Seasons Place Kuala Lumpur - a 1.5 million sqft integrated development owned by Venus Assets Sdn Bhd and located just a stone's throw away from the Petronas Twin Towers.

MERDEKA PNB 118 (KL118) DISTRICT COOLING TOWER , Kuala Lumpur
Fire Fighting System,, FM/UL Project
Merdeka PNB 118 is a 118 floors megatall skyscraper currently being built in Kuala Lumpur, Malaysia. The KL118 Tower by state-owned fund manager Permodalan Nasional Bhd (PNB) is set to be among the world's top 10 tallest structures when completed by 2022. The project is part of a larger development complex known as Warisan Merdeka (Heritage Independence), which will feature four residential towers and a KL118 shopping mall.

TROPICANA GARDEN PHASE 3 & 4 , Kota Damansara
Fire Fighting System

Tropicana Gardens is the latest up-and-coming project to be strategically developed in the bustling, well-established area of Kota Damansara. The project is a luxurious integrated mixed development and is set to complete in 2018. The Tropicana Gardens' Cyperus Serviced Residences offers modern layout and its masterplan nears fruition with the unveiling of its fourth and final residential phase Dianthus.

MRT SUNGAI BULOH – SERDANG – PUTRAJAYA (SSP), Kuala Lumpur
Fire Fighting System, FM/UL Project

The SSP Line is the second line of the Klang Valley Mass Rapid Transit (KVMRT) project to be developed. The project is developed by MMU-Gamuda and it official launched in July 2017. The alignment will have a length of 52.2km, consisting of 38.7km of elevated tracks and 13.5km running through underground tunnels. Several stations on Sungai Buloh-Serdang-Putrajaya Line are awarded by Sunway Construction to us, included Damansara Damai, Sri Damansara East, and Sri Damansara West. The project is targeted to complete in 2019.

COMPLETED PROJECTS

PKT LOGISTIC WAREHOUSE , Batu Kawan
Fire Fighting System
The 12 Waves warehouse in Batu Kawan Industrial, Penang is the central component of PKT's integrated One Auto Hub. The project is one of the three major components of PKT's Penang-based logistics hub, One Auto Hub, after The Ship Campus and The Lighthouse Lodge. The 12 Waves, which costs RM120mil with a built-up area of 600,000sq ft, is ready to cater to customers from automotive and non-automotive sectors. The site is completed in 2017.

HANWHA Q-CELL , Cyberjaya
Fire Fighting System
Headquartered in Seoul, South Korea, Hanwha Q Cells have diverse its international manufacturing facilities in Cyberjaya, Malaysia. Q-Cells Malaysia Sdn. Bhd. manufactures crystalline solar cells with its new building with four module production lines at main site for mass production in Cyberjaya. The 800 Megawatt Module Factory's construction completed in 2016.

GENTING SKY AVENUE MALL & CASINO (20TH FOX CENTURY) , Genting Highlands
Smoke Control System
Sky Avenue Mall Genting Resorts World is a new project which is opening in 2017 and with the size of 390,000 square feet housing over 165 retail lots, food and beverage outlets and cinemas. With successful simulation exercise conducted daily on its facilities before opening, the resort's latest casino is expected to open its doors soon. We have installed more than 1000 sets of smoke curtain within a year time in Sky Avenue Mall and T3 Casino.

MYDIN HYPERMARKET , Bukit Mertajam
Fire Fighting System & Smoke Control System
Mydin the largest and well-established Malaysian-owned company, namely MYDIN Mohamed Holdings Berhad, which involved in wholesaling and retailing. The project is completed in 2015. It was the company's 20th wholesale hypermarket and the largest mall in the Malaysia. The RM 284 million investment on Mydin Mall, which has about one million sqft of space.

TUDM A400 MILITARY HANGAR , Subang
Fire Fighting System & Smoke Control System
A newly built hangar, specifically for the A400M aircrafts, is completed in 2016. It is the first hangar built for the A400Ms in Asia and the biggest in the world. The hangar is expected to fit in four A400M aircraft which will be received by The Royal Malaysian Air Force (RMAF).

COMPLETED PROJECTS

MOTOROLA INNOPLEX , Penang
Fire Fighting System
Motorola Innoplex is a new research and development (R&D) center, operated by Motorola Solutions, Inc., a leading provider of mission-critical communication solutions and services for enterprise and government customers. The new premise is completed in 2014. It encompasses 227,000 square feet on seven floors and is linked via a bridge to the Motorola Solutions' manufacturing facility, known as the Technoplex.

KL GATEWAY , Bangsar South
Smoke Control System
KL Gateway is a massive development located in the vicinity of Bangsar South. Developed by Suez Domain, this mixed development comprises residences, corporate towers and a retail mall, while KL Gateway Mall serves as an epicentre with an approximate gross floor area of 500,000 sqft.. This serviced apartment comprises two 38–storey high-rise towers (KL Gateway Residences 1 & 2) and set to open in 2017.

ONE SANDILANDS , Penang
Fire Fighting System
The One Sandilands is a mixed development Project by BHL Waterfront Sdn Bhd and is a subsidiary of the Heng Lee Group. The project is located at Jelutong, Penang and completed in 2017. It comprises two adjacent 40-storey skyscrapers including a 6-storey service podium.

LATEXX MANUFACTURING SDN.BHD , Taiping
Fire Fighting System
Latexx is one of the largest medical examination gloves producers in Malaysia. It is an internationally-oriented group that develops, produces, and sells highly specialised rubber and plastic products for the medical and industrial sectors. The site is completed in 2015. It located on the Kamunting Industrial Estate, Perak.

PRAI CCGT POWER PLANT , Penang
Fire Fighting System
The Prai CCGT Power Plant in Seberang Perai, Penang is currently the world's largest and most efficient combined cycle gas turbine power plant, supplying 1,071-megawatt (MW) along the western coast of peninsular Malaysia. The new high efficiency power plant comprises two blocks of single shaft combined cycle gas turbines that utilise the most efficient H-Class technology gas turbine with a block efficiency rate of 59.7 per cent. The power plant is on track for commercial operation on Jan 1, 2016.

MIDHILLS GENTING , Genting Highlands
Fire Fighting System
Midhills Genting, is located mid-way up the Genting Highlands, expected to be completed in 2018. The project is a unique resort-styled development graced with Feng Shui-friendly. The important Feng Shui elements of Metal, Wood, Water, Fire and Earth are perfectly balanced and aligned with its location in a lush valley surrounded by lofty mountains and hills, virgin rainforests and wooded glades.

COLT

COLT ENGINEERING SDN BHD

(183319-H)

PENANG FACTORY

No.1, Lorong Saga Jaya 5,
Taman Perindustrian Saga Jaya,
13600 Perai, Penang.

E colt.prai@coltfire.com

PENANG MAIN OFFICE

C-21-1, Persiaran Bayan Indah,
Bayan Bay, Sungai Nibong,
11900 Penang.

T +604 644 8888
F +604 644 3333
E enquiries@coltfire.com

KEDAH OFFICE

132, Persiaran 6, Kulim Avenue,
Kulim Hi-Tech Park,
09000 Kulim, Kedah.

T +604 402 6088
E enquiries@coltfire.com

KUALA LUMPUR OFFICE

B-G-19, Block B, Merchant Square Tropicana,
No. 1, Jalan Tropicana Selatan 1,
47410 Petaling Jaya, Selangor.

T +603 7610 2030
F +603 7887 9833
E colt.kl@coltfire.com

PARTNERS

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