Fire Protection
Safety & Security
Power Protection

MAB GROUP

MAB FIRE PROTECTION (PVT) LTD.
MAMUN ALI BUMASUK (PVT) LTD.
MAB INTERFACE (PVT) LTD.

MAB GROUP

MAB FIRE PROTECTION (PVT) LTD | MAMUN ALI BUMASUK (PVT) LTD

MAB INTERFACE (PVT) LTD.

Vision:

The company is dedicated to ensure that its products and services are fully meeting the requirements of the customers at all times. The goal of the company is to achieve a high level of customer satisfaction. Commitment to the implementation of supporting managerial and business operational systems is essential to realizing that goal.

The company is committed to comply with the requirements and continually improving the effectiveness of the quality management system certified by ISO 9001:2008. Company's workforce is committed to understand and fully implement company's policies and objectives, and are able to perform duties effectively through ongoing training and development program.

Customer Satisfaction is our Priority

Mission:

Our un-compromising ethics and honesty at all times, in all situations both professionally and personally earn excellent credence and awards in recognition of our services and our focus for growth opportunities by nurturing linkages with local and International companies to spread knowledge, share technical resources and ensure quality with development programs and trainings to maximize mutual benefits and deeper understanding.

We respect the dignity, rights, and provide unrestricted opportunity for personal advancement to employees irrespective of the gender, ethnicity, beliefs, culture and religions. We also believe in treating our employees with the same principles in order to build mutual respect, confidence and trust based upon integrity, honesty, openness and competence.

We will be accountable as individual, as employees for our ethical conduct and responsible for compliance with the best practices of corporate governance with applicable laws and policies.

We are committed to drive and achieve results while pursuing the highest standards and maximizing the use of resources at par excellence by adhering to the Internationally recognized highest moral, ethical, social and legal standards in full compliance with all the applicable laws and regulations including the United Nations Convention on the business transactions which we will diligently follow and comply with as per national and international regulations concerning environmental and ethical issues, and occupational health and safety including ethical conduct and respect for human rights in the spirit of internationally recognized social and ethical standards.

Contents

HEAD OFFICE:

MAB House, 24-C,
South Park Avenue,
Phase II Extn.,
Defence Housing Authority,
Karachi-75500 (Pakistan).
Tel: (92-21) 3589-5295/98 (4 lines)
Fax: (92-21) 3588-7166
E-mail: mab@mabgrp.com
         mab.fire@mabgrp.com
         mab.interface@mabgrp.com
URL: www.mabgrp.com

SERVICE STATION:

13, Boat Building Yard,
West Wharf, Karachi.
Tel   : (92-21) 3220-1140
E-mail : life.rafts@mabgrp.com

BRANCH OFFICE:

* Islamabad Branch Office
* Lahore Branch Office

BANKERS:

(1) Soneri Bank Limited
(2) Bank Al-Habib Limited
(3) United Bank Limited

MAB FIRE PROTECTION (PVT.) LIMITED.
GST # : 12-90-9999-877-28, NTN # : 0860416-9

MAB INTERFACE (PVT.) LIMITED.
GST# : 12-90-9999-879-82 : NTN# : 0711012-0

MAMUN ALI BUMASUK (PVT.) LIMITED.
NTN# : 0711041-3

NFPA

MAB FIRE PROTECTION	MAB INTERFACE	MAMUN ALI BUMASUK
Since-1982	Since-1982	Since-1982

ISO 9001:2015 CERTIFIED COMPANY

Introduction

MAB FIRE PROTECTION (PVT) LIMITED.

MAB Fire Protection (Pvt.) Ltd was established in the year 1982, since than, MAB is endowing quality services of Fire Safety to all types of segments like Industries, Banks, Telecom, Power Institutes, Hospitals, Marine, Aviation etc. Up to now. MAB has successfully installed thousands of Fire Protection & Detection System & Hundred of Systems are under maintenance. 24x7 continuous surveillance of Fire System installed at major telecom facilities are also provided. MAB achieved significant milestone by Introducing FM200 Fire Suppression Systems in the region, besides, MAB is catering complete Fire Safety solution by offering NOVEC 1230 Clean Agent & Co2 Fire Suppression Systems, Water & Foam Flooding Systems & Fire Extinguishers (Sales, Service and Refilling)

* WORKFORCE WITH EXPERTISE

Holding overall work force of 350+ qualified & competent personnel along with facilities equipped with latest equipments & gadgets. MAB is ambitious to serve its clientele with a sheer professional edge. Continuous technical education, including periodic training (in-house & abroad) is provided to technical employees keeping them skilled to meet with advent of latest advancement to Fire Protection and Safety.

* ENGINEERING DIVISION

Survey, System Design, Supply, Installation, Testing, Commissioning, providing training for operation of system, Safety Drills, Corrective Maintenance, Preventive Maintenance and 24x7 Surveillance of Fire Systems. After Sales Services during warranty period, maintenance after warranty to keep the systems functional to its fullest capacity.

The Engineering Division operates independently and as a support to other members of the group for all kinds of needs.
* Load calculation, supply installation after sales services of Diesel / Petrol / Generators.
* Data center design & implementation.

* We have the facility to provide services for all kinds of Fire Detection & Alarm System, Analogue Addressable Fire Alarm System, FM200 Fire Suppression System, Co2 Fire Suppression System, other Fire Fighting Equipment, CCTV Surveillance, UPS Systems and Access Control System.
* FM200 Refilling facility for all sizes of cylinders.
* Carbon Dioxide Refilling facility for small cartridges.
* Dry Chemical Powder Refilling facilities for Extinguishers.
* Testing Servicing, Repairing & Maintenance facilities are available for Electronics Circuit Cards, Micro-Processor based systems used in Fire Detection & Alarm System, Burglar or Intruder Alarm Systems, CCTV, UPS Systems, rectifier Access Control System & other allied items.

By virtue of MAB's high-tech engineering capabilities and readiness for taking up challenges, the company further diversified to deal in electronics surveillance, building security and communication system for industrial, commercial and Govt. Sector.

* Conventional Fire Detection Alarm System.
* Advanced Intelligent Analogue Addressable Fire Alarm System.
* Software or IP Base Fire Alarm System.
* Extinguishing Fire Control Panel.
* Detector. (Optical, Gas & Heat)
* Manual Call Point. (Break Glass Type)
* Fire Alarm Bell & Sounder with Flasher.
* Flameproof & Intrinsically Safe Devices.
* Access Control System

AUTOMATIC TOTAL GAS FLOODING SYSTEM

* NOVEC 1230 System.
* FM200 System.
* Co2 System.

AUTOMATIC TOTAL FOAM FLOODING SYSTEM

* Fire Hydrant System & Sprinkler.
* Sprinkler System.
* Foam Sprinkler System.

ULTRASONIC MONITORING SYSTEM

* Porta Max.
* Perma Level.
* Porta Steel.
* Porta Tank.
* Porta Sonic.

SECURITY SERVICES

* Building Management System
* Access Control System
* Hybrid Supports (IP & Analogue)
* Tribrid Supports (Analogue & IP)
* DVR
* NVR
* IP Surveillance
* CCTV Surveillance

ZITON UK

* Conventional Fire Detection & Alarm System
* Addressable Fire Alarm System
* Radio Fire Protection, Hazardous Area Devices
* Power Supplies and Door Magnets
* Laser Sense Ultra Aspiration Detector
* Gas Control Unit
* Specialist Fire Protection
* Heat Sensing Cable
* Maestro Software

AVENGER SYSTEMS. USA.

* Analogue Addressable Fire System
* Conventional Fire Alarm System
* Conventional & Releasing Detection System

KENTEC ELECTRONICS LTD. UK.

* Analogue Fire Detection.
* Conventional Fire Detection.
* Extinguishing Control Panel.
* Audio Visual Indicator Units.

SEVO SYSTEM USA

* NOVEC 1230 Fire Suppression System.

HYGOOD - MACRON SAFETY SYSTEMS, UK.

* FM200 Fire Suppression System.
* NOVEC 1230 Fire Suppression System.

COFEM. SPAIN.

* Addressable Fire Detection and Alarm System
* Conventional Fire Detection and Alarm System
* Cofem Remote Monitoring System
* Voice Evacuation System
* Audio System

TANDA. CHINA.

* Conventional Fire Alarm System
* Addressable Fire Alarm System

ASENWARE. CHINA.

* Fire Alarm System,
* Fire Fighting.
* Water Sprinkler System.
* Gas Suppression System.
* Fire Pump, Hose Reel, Fire Extinguishers
* Hose Reel.
* Fire Extinguishers

SANJIANG FIRE CONTROL EQUIPMENT - CHINA

* Fire Alarm System.
* Residential Detectors.
* Wireless Fire Alarm System.
* Gas extinguishing System.

MAVILI. (MAVIGARD) TURKEY

* Intelligent Analogue Addressable Fire Alarm System.
* Conventional Fire Alarm System   * Gas Alarm System.
* Marine Type System   * Extinguishing System.
* Air Sampling System.   * Maxlogic Software.

FIRE FIGHTING ENTERPRISES. UK.

* Fire Detection Devices for Large area.
* Beam Smoke Detectors.
* Flame Detectors.

LICHFIELD FIRE & SAFETY EQUIPMENT - UK.

* Fire Alarm & Detection System.   * Standpipe System.
* Fire Hydrant Pumps.   * Suppression System.
* Fire Protection Valves.   * Fire Extinguishers
* Sprinkler and Accessories.

VIMPEX. UK.

* Hydrosense Water Leak Detection.
* Fire Evacuation Products.

COLTRACO ULTRASONIC. UK.

* Portalevel Max.   * Permalevel etc.
* Portagauge.   * Portasonic.
* Portascanner.

AMEREX CORPORATION. USA

* Portable/ Wheeled Fire Extinguishers,
* Pre-engineered Restaurant Systems
* Gas Detection
* Vehicle Fire Suppression Systems.
* Industrial Systems & Fire Detection Devices

INFORM ELECTRONICS - TURKEY.

* UPS, AVR, SVR.
* Automatic & Static Voltage regulator.
* Rectifier, Inverter, Battery Charger.
* Frequency Converter, 19" Cabinets, Transformer.
* Batteries

NOVEC 1230 Base Fire Suppression System:

Novec 1230 Fire Protection fluid was developed as a sustainable clean extinguishing agent for use in total flooding applications. In order to understand how NOVEC 1230 fluid extinguishing a fire, It is important to review.

The principal aspect of fire chemistry, Four Components- Fuel, Oxygen, heat and the combustion chain reaction - are often referred to as the "FIRE Tetrahedron".

The fire tetrahedron shows that a fire can be extinguished by breaking one or more of the links between these components or by changing the balance between them:

1. By interrupting the combustion chain reaction.
2. By containing or eliminating the source of fuel.
3. By cutting off or diluting the source of oxygen.
4. By removing sufficient heat from the fire.

NOVEC 1230 fluid, like other halocarbon halon alternative, extinguishes principally via the fourth mechanism - removing heat from the fire. Upon discharge, Novec 1230 fluid creates a gaseous mixture with air. This agent/air mixture has a heat capacity much larger than that of air alone. A higher heat capacity means that this gas mixture will absorb more energy (heat) for each degree of temperature change it experiences.

Properties description

Not for specification purpose. All value at 25 °C (77°F) inless otherwise specified.

Properties	NOVEC 1230 Fluid
Chemical formula	$CF_3 \ CF_2 \ C(O) \ CF(CF_3)_2$
Molecular weight	316.04
Boiling point @1 atm	49.2°C (120.6°F)
Freezing point	-108.0°C (-162.4°F)
Critical temperature	168.7°C (335.6°F)
Critical volume	494.5 cc/mole (0.0251 ft³/lbm)
Atmospheric Lifetime (days)	5

Typical Applications:

Novec 1230 fluid can effectively be applied in total and localized flooding, inerting and explosion suppression applications in the following areas:

- ➤ **Data Processing Centers**
- ➤ Computer Rooms
- ➤ Data Storage Facilities

- ➤ **Telecommunications**
- ➤ Cellular Sites
- ➤ Switching Centers

- ➤ **Commercial and Military** Aviation
- ➤ Engine Protection

- ➤ **Commercial Marine**
- ➤ Control and Paint Rooms
- ➤ Engine Rooms
- ➤ Storage Rooms

- ➤ **Military Systems**
- ➤ Combat Vehicles
- ➤ Marine Engine Rooms

- ➤ **Oil & Gas Petrochemical Facilities**
- ➤ Pumping Facilities
- ➤ Gas Compressor Rooms
- ➤ Offshors Oil Exploration Rigs

- ➤ **Transportation**
- ➤ Merchant Marine Vessels
- ➤ Mass Transit Vehicles

- ➤ **Recreation**
- ➤ Pleasure Craft
- ➤ Race Cars

- ➤ **Cultural Facilities**
- ➤ Museums
- ➤ Libraries
- ➤ Archives

- ➤ **Medical Facilities**
- ➤ Manufacturing Facilities
- ➤ Storage Areas

Ozone Depletion Potential:

Novec 1230 fluid, which contains no Chlorine or bromine, has an Ozone depletion Potential of Zero.

Global Warming Potential:

The Global Warming Potential (GWP) is an index that provides a relative measure of the possible climate impact due to a compound that acts as a greenhouse gas in the atmosphere.

Potential for Reducing GHG Emissions:

The fire protection industry has made Considerable progress in reducing emissions from the relatively high levels experienced during the use of halon. However, the high GWP of the HFCs used in these applications combined with their growing installed base result in continually increasing Greenhouse gas emission.

NFPA Codes

NFPA 2001 (Clean Agent Extinguishing System)

Alarm/Sounder   Solenoid Valve   Smoke Detector

Manual Release   Control Panel   Discharge Nozzle

EXIT

Agent Cylinder

Smoke Detector

Discharge Nozzle
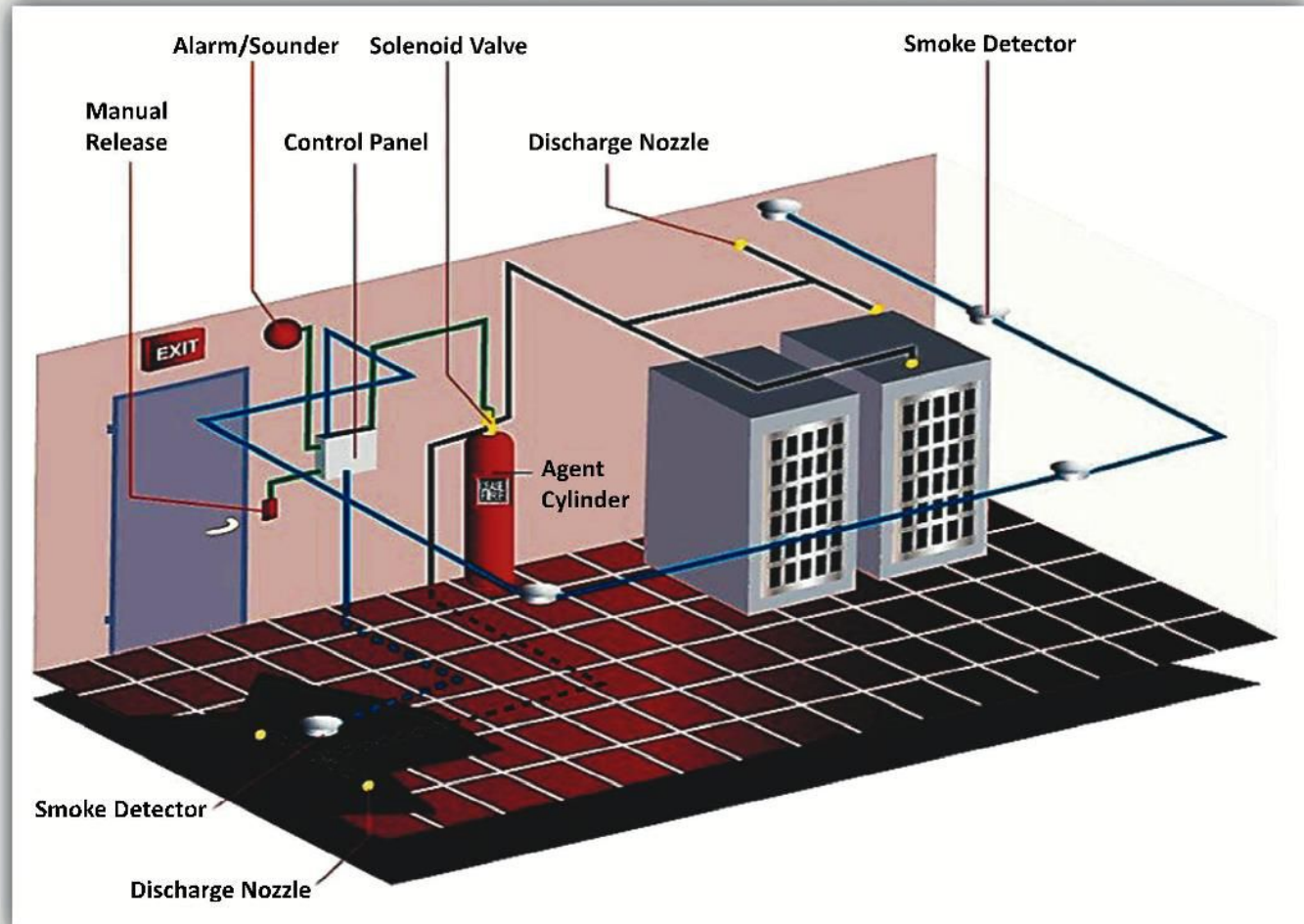
FM-200 Fire Suppression System

FM200 Fire Suppression System, smoke detectors sense the presence of fire in the protected facility. The detection and control panel then sounds an alarm, shut down air handlers, disconnects power from the protected equipment, and then release agent into the protected area. FM200 systems reach extinguishing levels in 10 second or less, stopped ordinary combustible, electrical, and flammable liquid fires before they cause significant damage. That's the fastest fire protection available period. When fire is extinguished this quickly, it means less damage, lower repair costs, and an extra margin of safety for people. It also means less downtime and disruption of business. FM200 Fire Suppression can be safety used where people are present.

In application where space is at a premium, FM200 Fire Suppression Systems are the superior choice. The FM200 agent is stored in cylinder as a liquid and pressurized with nitrogen, saving huge amounts of storage space. In fact, for the same amount of protection, FM200 systems take up to seven times less storage space than systems based on CO_2 and inert gases.

YOU CANNOT AFFORD TO SETTLE FOR MINIMUM FIRE PROTECTION WHEN LIVES AND VALUABLE ASSETS ARE STAKE.

Applications:

- ✓ Data Processing Centers
- ✓ Telephone Switches
- ✓ Process Control Rooms
- ✓ Art and Historical Collections
- ✓ Cellular Sites
- ✓ Switching Centers
- ✓ Engine Rooms
- ✓ Storage Rooms
- ✓ Archives Room
- ✓ Facilities where water damage from sprinklers must be avoided at all costs

Common Equipments Used In Conventional Fire Suppression System Based On Fm200:

- ➢ Extinguishing Control Panel
- ➢ Emergency Power Supply Backup
- ➢ Optical Smoke Detector
- ➢ Ionization Smoke Detector
- ➢ Fire Alarm Bell
- ➢ Sounder with Flasher
- ➢ Abort Switch
- ➢ Manual Release
- ➢ Manual Actuator
- ➢ FM 200 gas
- ➢ FM200 Cylinder
- ➢ Nozzle

PROPERTIES DESCRIPTION:

Chemical Structure	CF3CHFCF3
Chemical Name	Heptafluoropropane
Appearance	Colorless Gas
Boiling Point	-16.4 degrees C (3 degrees F)
Melting Point	-131 degrees C (-204 degrees F)
Molecular/ Chemical Formula	C3HF7
Physical Weight	170
Physical State	Gas
Reactivity in Water	Not water reactive
Atmospheric Lifetime (yrs)	36.5

NFPA CODES:

NFPA 2001: Clean Agent Extinguishing System

NFPA 76: Standard for the Fire Protection of Telecommunications Facilities

Vesda Pipe

Nozzle

Gas Pipe

Vesda

FM200 Cylinders
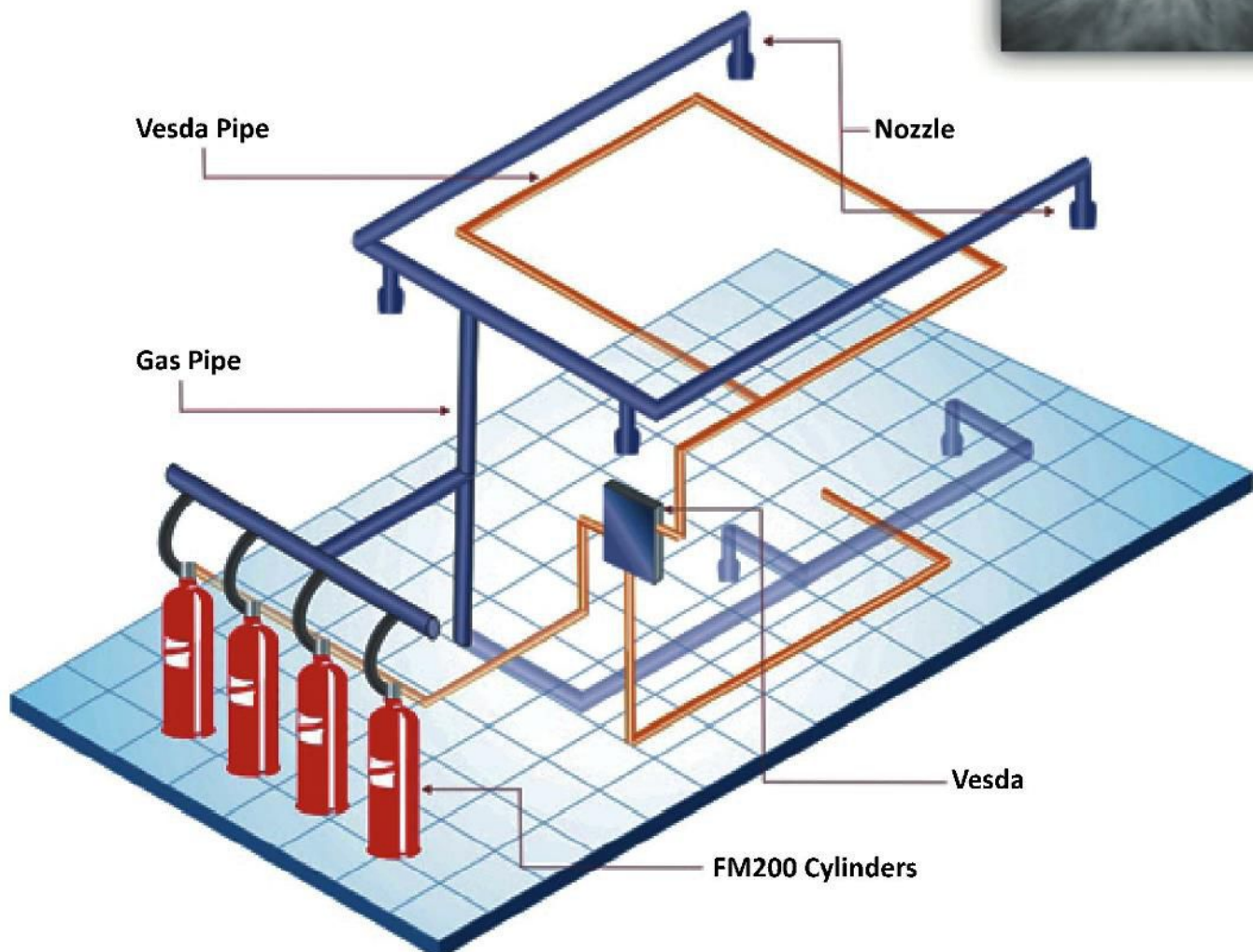
MAB Fire Protection Provides full-scale Fire Hydrant Supply and installation for businesses, and industrial centers all throughout Pakistan. MAB staff is fully licensed, highly trained and experienced Fire Hydrant technicians to meet all your Fire Hydrant needs. With MAB, one call does it all. We provide high quality services all over Pakistan.

A fire hydrant is an above ground connection that provides access to a water supply for the purpose of fighting fires. The components include piping, fitting, Hose reels, Hose cabinets, hydrants & pumps. Every hydrant has one or more outlets to which a fire hose may be connected.

Three types of pumps are installed to ensure the smooth functioning of Hydrant system i-e Jockey, Electric & Diesel Pump. Application that have a hydrant system may have fewer chances of losses since firefighters should be able to more rapidly extinguish a fire.

Fire Pump

MAB Provides all types of Fire Pump Controllers that are factory assembled, wired, tested as a unit and comply to all requirements of the latest edition of NFPA-20 (Centrifugal Fire Pumps) and NFPA-70 (National Electrical Code). Controllers are listed by Underwriters Laboratories, Inc., in accordance with UL218, Standard for Fire Pump Controllers, CSA and Standard for Industrial Control Equipment (CUL) and approved by Factory Mutual (FM). All controllers are Y2K compliant.

Fire Pump Electrical Driven

MAB provides and install well reputed brands of Premium Custom Motor Driven Centrifugal Fire Pump. All Pumps supplied are developed and designed in accordance to NFPA 20 requirements with Listed & Approved Drivers.

MAB maintain its standard in supplying listed & approved High Efficiency Fire Pump Motors and Centrifugal Fire Pumps to package Heavy Duty and High Quality Compact Skids. MAB supply Listed and Approved Fire Pumps that can also be coupled with any other Listed Diesel Engine of any specific brand as per customer's requirement.

Jockey Pump

Jockey pumps are small, motor driven pumps used in conjunction with main fire pumps to compensate for minor leaks in the fire protection system and automatically maintain stand-by pressure. This reduces wear on the main pump and controller caused by unnecessary, frequent operation. Jockey Pump controllers are available for across the-line starting.

Fire Pump Diesel Driven

MAB supply and install well reputed Premium Custom Engine Driven Centrifugal Fire Pump Skids. We Supply pumps in accordance to NFPA 20 requirements with Listed & Approved Drivers. MAB maintains its standard with using high quality Fire Pumps to package Heavy Duty and High Power Compact Skids. MAB offers listed Centrifugal Fire Pump Skids that meet every fire protection need.

MAB maintains its standard with supplying High Efficiency Fire Pump Motors and Centrifugal Fire Pumps to package Heavy Duty and High Quality Compact Skids. MAB provides Listed and Approved Fire Pumps can also be coupled with any other Listed Diesel Engine of any specific brand as per customer's requirement.

Water Supply & Storage

Water supply for a fire hydrant system can be derived from a reliable source of water such as; street mains, static water supply such as a tank.

MAB provide services for installation of all types of Water storage tanks for Fire Hydrant System. The capacity or volume of the water supply or storage must also be taken into account as part of the hydraulic analysis.

Pipework & Valves

To direct the water from its point of origin (supply) to its destination (hydrant valve) requires a series of interconnected pipes at defined sizes. The dimensions of the pipe is determined by hydraulic analysis. The control valves are used in combination with the pipework to control a direct the flow of water.

Hydrant

The end-point of a Fire Hydrant System is the Hydrant (also known as a Hydrant Valve or Landing Valve) strategically located throughout a building in accordance with the provisions of NFPA codes. The nominal diameter for a hydrant valve connection is 65mm. The connection for a fire hose varies as per various standards. In simple terms fire brigades throughout Pakistan use different hose connections. In these cases, the Hydrant must also be fitted with a connection or coupling compatible with the local fire brigade.

ACCESSORIES AND ARRANGEMENT

LEGEND OF ACCESSORIES	
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
	GATE VALVE
	CHECK VALVE
	FLEXIBLE JOINT
	ELBOW
	TEE
	COMPOUND PRESSURE GAUGE
	DISCHARGE PRESSURE
	CASING RELIEF VALVE
	FLOW METER
	DRIP BALL VALVE
	BUTTERFLY VALVE GATE VALVE DESY CAN BE USED OPTIONAL
	GATE VALVE
	WASTE CONE
	MAIN RELIEF VALVE
	HOSE VALVE
	ELECTRIC CONNECTION
	RAW WATER COOLANT LINE
- - -	
	SENSING LINE

headers

to system

JOCKEY CONTROLLER

ELECTRIC CONTROLLER

JOCKEY PUMP ARRANGEMENT

to waste

DIESEL CONTROLLER

HORIZONTAL SPLIT CASE WITH AUTOMATIC AIR RELEASE VALVE

water source ABOVE GROUND

VORTEX PLATE

MOTOR DRIVEN SKID ARRANGEMENT

DIESEL DRIVEN SKID ARRANGEMENT

Automatic Sprinkler System

Time is essential in the control of fire. Automatic sprinkler systems are one of the most reliable methods available for controlling fires. MAB Fire Protectio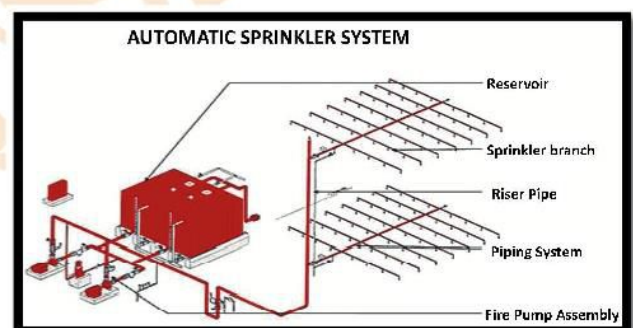n staffs are fully licensed, highly trained and experienced fire sprinkler technicians to meet all your fire sprinkler needs. With MAB, one call does it all. We provide high quality services all over Pakistan. A sprinkler head is an automatic (open once only) tap. The sprinkler head is connected to a pressurized water system. When the fire heats up the sprinkler head, it opens at a pre-set temperature, thus allowing pressurized water to be sprayed both down onto the fire and also up to cool the hot smoky layer and the building structure above the fire.

This spray also wets combustible material in the vicinity of the fire, making it difficult to ignite, thereby slowing down or preventing fire spread and growth.

"When a sprinkler head operates, the water pressure in the system drops, activating an alarm which often automatically calls the fire service via a telephone connection.

Application: Sprinkler systems are usually installed in high or large buildings and high fire hazard occupancies."

AUTOMATIC SPRINKLER SYSTEM

Reservoir

Sprinkler branch

Riser Pipe

Piping System

Fire Pump Assembly

MAB Fire Protection Provides complete solution of Foam Fire Extinguishing System for businesses, and industrial centers all throughout Pakistan. MAB staff is fully licensed, highly trained and experienced technicians to meet all your Foam Fire Suppression needs. With MAB, one call does it all. We provide high quality services all over Pakistan.

Foam Water Systems generally work by allowing foam concentrate to mix with water flowing into the piping system. These systems are equipped with a bladder tank containing foam. When a fire is detected a signal is sent to the releasing panel to open the deluge valve allowing water to flow. At the same time, piping to the bladder tank flows and pressurizes the outer shell of the bladder tank which forces foam concentrate to travel into the system piping and then into the Foam Proportioner. The foam solution produced by \water and foam concentrate flows into the system piping and is discharged through the open nozzles or sprinklers.

Types of Foam Water Spray Systems:

MAB Fire Protection provide and install all four type of Fire Hydrant System.

| *Wet Pipe Systems* | *Dry Pipe Systems* | *Deluge Systems* | *Preaction Systems* |

Drain

Drain
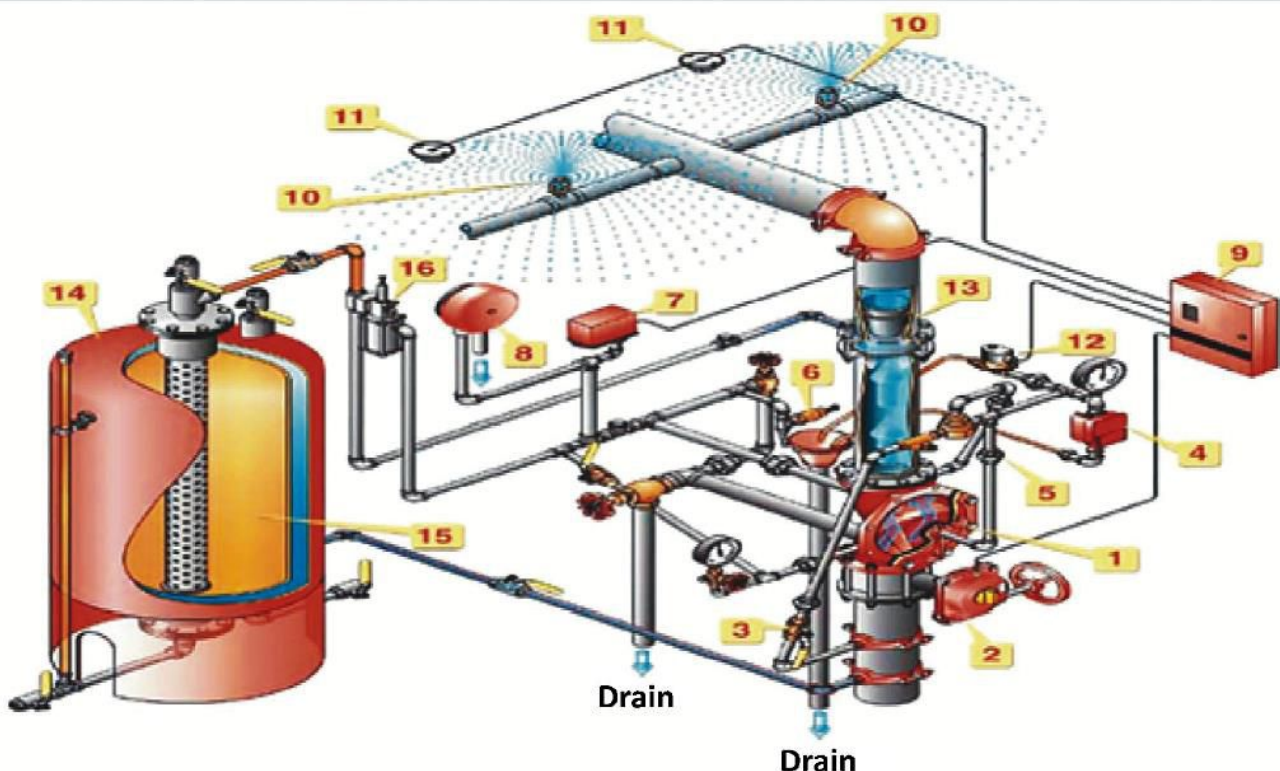
LEGEND

1	Deluge Valve (DV-5)	7	Pressure Switch	13	Foam Proportioner
2	Isolation Valve	8	Water Motor Gong	14	Foam Bladder Tank
3	Diaphragm Supply Valve	9	Releasing Panel	15	Foam Concentrate
4	Manual Control Station	10	Spray Nozzle	16	Hydraulic Ball Valve
5	Automatic Shut-off Valve	11	Smoke/Heat Detector		
6	Automatic Drain Valve	12	Solenoid Valve		

Analogue Addressable Fire Alarm Systems differ from conventional systems in a number of ways and certainly add more flexibility, intelligence, speed of identification and scope of control. For this reason Analogue Addressable Fire Alarm Systems are the natural choice for larger premises and more complex system requirements.

In an Analogue Addressable System detectors are wired in a loop around the building with each detector having its own unique 'address'. The system may contain one or more loops depending upon the size of the system and design requirements. The Fire Control Panel 'communicates' with each detector individually and receives a status report, i.e. 'Healthy', 'In Alarm' or 'In Fault', etc. As each detector has an individual 'address' the fire alarm control panel is able to display/indicate the precise location of the device, which obviously helps speed the location of an incident and for this reason 'zoning' of the system is not necessary, although it may be done for convenience. Sounders may either be conventionally wired or by using addressable sounders, wired in a "loop" thereby making considerable savings in terms of cable and labor.

- ✓ Addressable Fire Alarm systems allow you to pinpoint the exact location of a fire with ease.
- ✓ The sensitivity of detectors is monitored constantly and any change in sensitivity causes a fault indication at the panel.
- ✓ The use of monitor modules allows contacts from sprinkler switches, existing fire alarm systems, fire dampers etc. to be monitored using detector loop wiring.

COMMON EQUIPMENTS USED IN ADDRESSABLE FIRE ALARM SYSTEM:

INTELLIGENT ADDRESSABLE FIRE CONTROL PANEL
- ➢ Addressable Repeater
- ➢ Addressable Smoke Detector
- ➢ Addressable Combination Detector

ADDRESSABLE MANUAL CALL POINT
- ➢ Addressable Fire Alarm Sounder
- ➢ Addressable Modules
- ➢ Loop Isolator
- ➢ Addressable Gas Control Unit
- ➢ Printer Kit
- ➢ Maestro Software
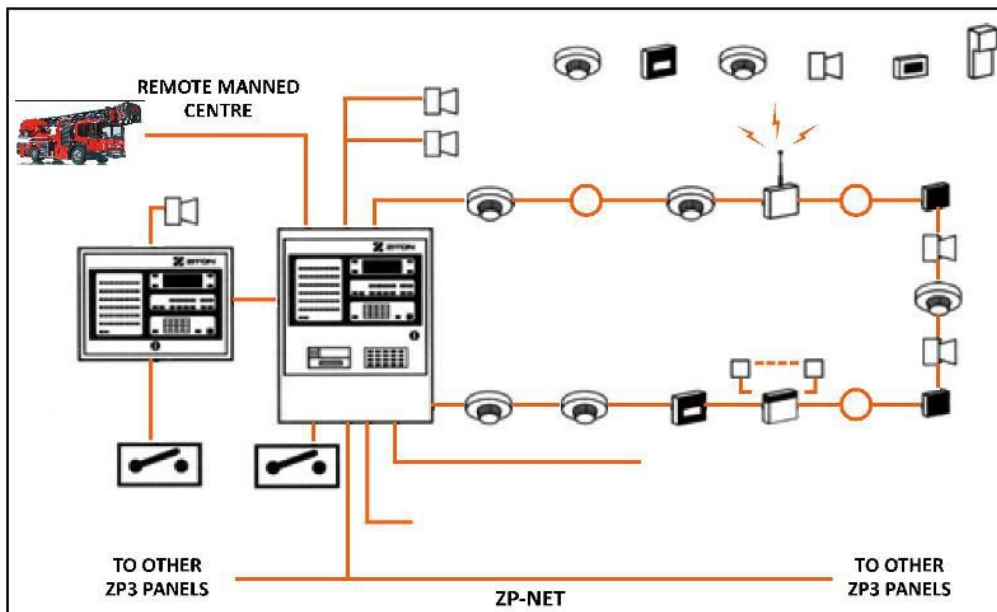
NFPA CODES:

NFPA 72 (National Fire Code)
NFPA 70 (National Electrical Code)

I LINK SOFTWARE :

I-link is the monitoring and configuration software of the algorithmic-addressable Cofem control panels that integrates CCTV to capture real images of fire incident.

Control Panel: The panel receives information from Environmental Sensors designed to detect changes associated with fire, monitors their operational integrity and provides for automatic control of equipment, and transmission of information necessary to prepare the facility for fire based on a predetermined sequence. The panel may also supply electrical energy to operate any associated sensor, control, transmitter, or relay.

Initiating Devices

Smoke Detector: Smoke detector is to collect field smoke data, transmit the data and alarm signal to the control panel. Most smoke detectors work either by optical detection (**Photoelectric**) or by physical process (**Ionization**).

Heat Detector: is designed to respond when the thermal energy of a fire increases the temperature of a heat sensitive element. The thermal mass and conductivity of the element regulate the rate flow of heat into the element. All heat detectors have this thermal lags. Heat detector has two main classifications of operation, **"Rate-of-Rise"** and **"Fixed temperature"**.

Beam Detector: Beam detection has become common within large open warehouses. They are cost effective when compared with point detection and suitable for heights way above the operating limits of conventional smoke detection.

Flame Detector: There are several types of Flame Detector. The optical Flame Detector is a detector that uses optical sensors to detect flames. There are also Ionization Flame Detectors, which use current flow in the flame to detect flame presence and thermocouple flame detectors. Ultraviolet (UV) detectors work with wavelengths shorter than 300 nm. Near Infrared (IR) array flame detectors, also known as Visual Flame Detectors employ flame recognition technology to confirm fire by analyzing near IR radiation via the pixel array of a Charge-coupled Device (CCD).

High Sensitivity Smoke Detector: is capable of detecting microscopic particles of smoke. Most air-sampling detectors are aspirating smoke detectors, which work by actively drawing air through a network of small-bore pipes laid out above or below a ceiling in parallel runs covering a protected area. Small holes drilled into each pipe form a matrix of holes (sampling points), providing an even distribution across the pipe network. Air samples are drawn past a sensitive optical device, often a solid-state laser, tuned to detect the extremely small particles of combustion.

Gas Detector: Some smoke alarms use a carbon dioxide sensor or carbon monoxide or LPG sensor or Methane Gas Detector to detect extremely dangerous products of combustion.

Duct Mounted Smoke Detection: The primary purpose of duct smoke detection is to prevent injury, panic, and property damage by reducing the spread (recirculation) of smoke. Smoke detection is mounted in such a manner as to sample the airflow through duct work and other plenums specifically fabricated for the transport of environmental air into conditioned spaces. Interconnection to the fan motor control circuits are intended to stop air movement.

Fire Alarm Pull Station is an active fire protection device, usually wall-mounted, that, when activated, initiates an alarm on a fire alarm system.

Notification appliances:

A Fire Alarm Notification Appliance is an active fire protection component. A notification appliance may use audible, visible, or other stimuli to alert the occupants of a fire or other emergency condition requiring action.
Fire Alarm Bell: Made of steel plate, fire alarm bell produces a clear ringing sound when activated thru fire alarm.

Fire Alarm Sounder: Fire alarm sounders should be installed throughout the building with an even distribution, to generally provide a minimum sound level of 65dB(A) or 5dB(A) above any background noise which is likely to persist for more than 30 seconds.

Sounder with Flasher: General Purpose Electronic Sounder and LED beacon for fire alarm applications. It is audible as well as visual notification device.

D-C401 Conventional
Photoelectric Smoke Detector

D-C101 Conventional
Photoelectric Smoke Detector

D-C402 Conventional Rate of Rise and
Fixed Temperature Heat Detector

D-C402 Conventional Rate of Rise and
Fixed Temperature Heat Detector

Alarm Bell

S-G481
Conventional Sounder Strobe

ESAS Emergency
Gas Override Control

K11031M2
Conventional Extinguishing Control Panel

Cylinder

COUNTRY'S LEADING PROFESSIONALS IN
FIRE SAFETY, POWER PROTECTION
& MARINE SAFETY

MAB®
GROUP

	MAB HEAD OFFICE
	BRANCH OFFICE
	PROJECT TEAM

CCTV has become invaluable for not only helping to detect but also to deter different types of crime, such as anti-social behavior, theft and criminal damage and for evaluating stored images as an investigative tool. It is proven that having highly visible cameras covering vulnerable areas of your premises reduces the opportunity to commit crime, both from external and internal sources.

CCTV Surveillance Cameras and Equipment

There is currently a vast array of CCTV Cameras and equipment on the market due to the many site specific and environmental conditions that need to be considered when designing a practical CCTV System.

MAB can evaluate your site and discuss the available options to suit your specific needs to ensure that the installation provides you with a highly effective security enhancement at affordable pricing.

The technology for today's CCTV systems has greatly improved over the last few years making it easy and affordable for businesses and homes.

Services Available

Commercial CCTV	Domestic CCTV	Face Recogition Cameras	Metal Detector	Digital Video Recording

IP and analogue Video Surveillance Systems

Visitor Control and Management Systems

Video Archiving and Remote Video Monitoring Systems

Biometrics and Proximity based Identity and Access Management (IAM)
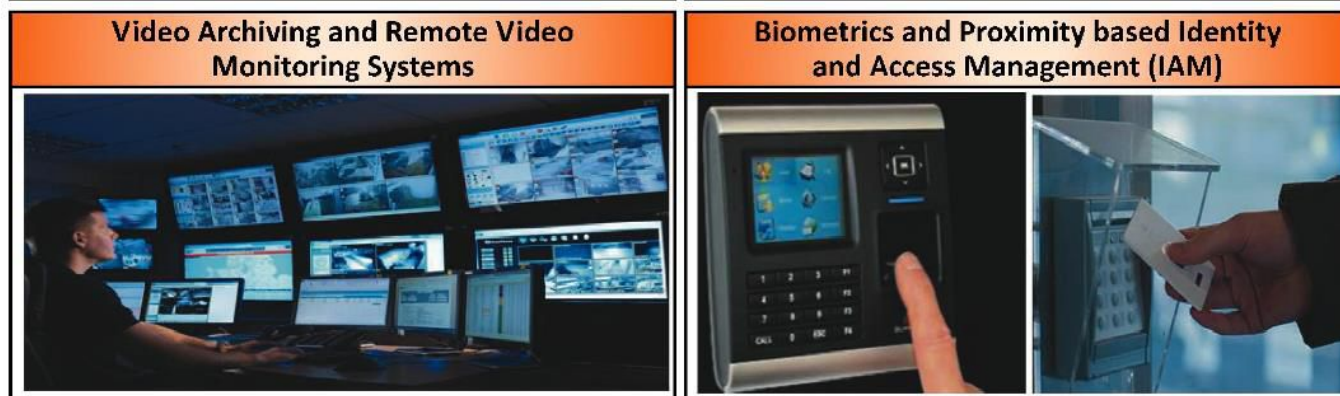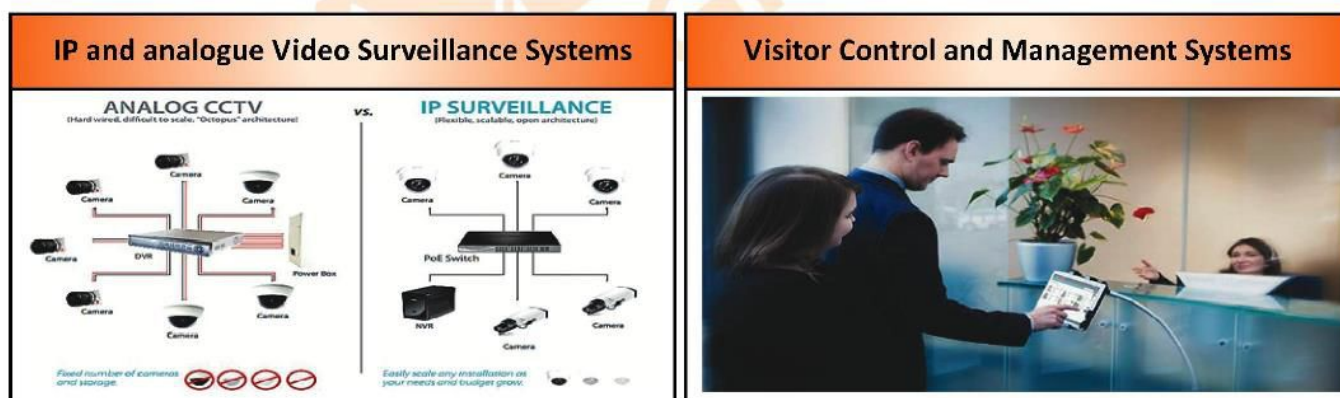
Client Expectations

* All new cameras are to be true IP HD and legacy cameras will be replaced with IP HD when no longer serviceable.
* All outdoor cameras will be in weather proof housings.
* Camera mounting must be aesthetically pleasing and conform to Facilities Office expectations as to size, location, form, color, and incorporated into existing light poles or buildings to the extent possible must meet Building Codes and Fire Codes (i.e., fire stop is used, no open holes left in bricks, roofs, etc.)
* All system wiring shall comply with ITS and Facilities Office specifications and shall be in compliance with applicable national codes and standards.
* All system wiring shall be concealed where possible.
* All cameras will have a field of view and HD archival quality acceptable to the University Police Department.
* All cameras will be named in consultation with the University Police Department.

Proposals will include;

(1) Supply, installation, testing, programming, adjusting, and commissioning high quality fast-acting IP CCTV surveillance system along with power supply, power distribution and required accessories. Work under this contract consists of the complete installation and includes, but is not necessarily limited to, the furnishing of all labor, superintendence, material, tools, software, and equipment necessary to complete all the work as specified.

(2) The price quoted by the vendor should include all the expenses incurred in commissioning of all cameras with power supply, accessories, software, video management system, and other devices complete with software.

(3) Video management software shall offer both video stream management, search capability, and video stream storage management. Recording frame rate and resolution in respect of individual channel shall be programmable.

(4) The provision of supervisory specialists and technicians at the job to assist in all phases of system installation, start up and commissioning.
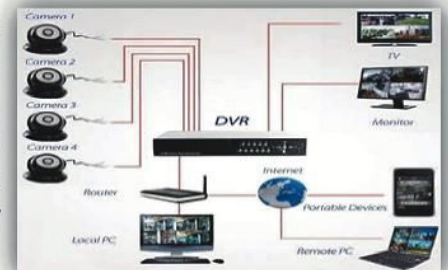
Our Priority

* System Wiring
* System programming
* System Installation
* System approvals
* Quality assurance
* Guarantee of Work
* Service/Maintenance

Point to Multi-point (Multiple Building) Wireless IP Camera System

Must Be Direct Line of Sight!

Outdoor IP camera connected to wireless transmitter antenna

Indoor IP camera connected to wireless transmitter antenna

Omni directional antenna + access point receiver connected to a router. Network video recorder (NVR) is also connected to the router.

MAB provides complete solution for Personal protective equipment (PPE) that includes protective clothing, helmets, goggles, breathing apparatus, or other garments or equipment designed to protect the wearer's body from injury or infection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.

Electrical Safety Solutions: ARC Flash Protection PPE:

400 V and above electrical services have sufficient capacity to cause an arc flash hazard. Arc flash suit reduces the risk and provide safety against arc flash hazards.

PROXIMITY SPECIALISED FIRE-FIGHTING 5- PIECE SUIT STYLE BETA 5 FIRETEX

Description:
Aluminized five piece overall made up of aluminized fabric FIRETEX, and internally lined with aramid spun-laced and fire-retardant fabric.

Jacket:
Wide shape, frontal snaps fastening, zipper protected by flap, elastic at the bottom sleeves and pouch to hold the breathing apparatus.

Trousers:
Wide shape, adjustable suspenders, elastic bottom legs and waist.

Booties:
Shaped to ensure the maximal practicality, adjustable straps for a better fitting to the legs, soles made of stratified material with insulated rubber, external cover made of anti-slipping and anti-cutting KEVLAR® bouclette fabric.

Five Fingers Gloves: long gauntlet style.

Hood:
Wide shape, usable with full-face mask and delivery system, internal safety helmet according to EN-397 classes −20°C −440 Vac, golden temperate glass visor with a thickness of 5 mm, adjustable elastic suspenders to fix the hood under the shoulders.

The overall is delivered in a practical carry-bag with information notes for use and maintenance.
Asbestos fibers or by-products are not used in the manufacture of the overall. The overall is externally made up of an aluminized heat reflective glass fiber fabric and it's insulated with aramidic spun-laced and internally lined with flame retardant fabric. Available sizes S-M-L.

Commonly Used Personal Protective equipment (PPE):

Personal Protective Equipment (PPE) - Specialized clothing or equipment worn by employees for protection against health and safety hazards. Personal protective equipment is designed to protect many parts of the body, i.e., eyes, head, face, hands, feet, and ears. MAB Provides safety mask, safety goggles, Knitted Gloves, cotton Gloves, Apron, Sleeves, ear plug, helmets, safety shoes, Industrial special purpose gloves.

Arc Rated Helmet & Visor

Arc Rated Balaclava

Wall Mounted Rescue Kit

CEI IEC 61243-1
Contact Voltage Detectors

Earthing & Short circuiting kits

Voltage Detectors

MaxiDry

Known and loved across the globe MexiFlex has become the World standard for precision handling gloves in dry environments. People have been asking us to male an oil repellent MaxiFlex that's still super thin, flexible, dexterous and comfortable. So we did. Here it is. We call it MaxiDry.

Liquid Repellence - We have increased resistance to oils via our LiquiTech.

Ultra Lightweight - Synthetic coating combined with an industry leading super light seamless knit liner provides excellent comfort, sensitivity, fit and dexterity.

Locking Cuff - Ensure the glove doesn't slip on the hand: an exclusive elasticated support in the wrist area provides a "locking" effect for a close and snug fit

MaxiDry

MAB Fire Protection Provides complete solution of Ultrasonic monitoring for businesses, and industrial centers all throughout Pakistan. We provide solution for liquid level indication, seal integrity, flow rate monitoring, thickness gauging, and bearing indication.

MAB provides handheld, reliable, accurate portable inspection products. We now also supplier constant liquid level monitoring systems.

The Portatank is a portable handheld device with a greater operating range up to tank diameter range 0.5-15 meters, of most common tank types such as steel, plastic, aluminum, etc. It is advanced, lightweight, accurate technology that is designed to improve safety by enabling the user to more easily and quickly identify the contents non-invasively. The portable, handheld device can be used for periodic checks of tanks.

The Portasonic 2.FL0 is a handheld ultrasonic flow meter for testing on an wide variety of different pipe dimensions, liquid types, measurement methods, flow speeds and environments. The unit has a straightforward testing process with a step by step guide on how to set your flow meter up before measuring. The user simply needs pipe diameter, wall thickness and liquid type information, to be able to easily and accurately measure flow rate

The Portalevel MAX is an ultrasonic liquid level indicator equipment is specially designed for users looking to identify the liquid level in large numbers of cylinders, containers with particularly large agent mass and those requiring UL Approval.

The Portasteele calculator provides the perfect companion to the Portalevel Technology for those looking to convert liquid height to agent mass and export reports to customers.

Portascanner® WATERTIGHT is an ultrasonic watertight integrity tester. Identify leaks in a wide variety of watertight, airtight or weather-tight seals such as hatch covers, doors and multiple cable transits, with decibel readouts to satisfy classification society requirements.

Portagauge: Ultrasonic thickness testing equipment can be used to help mitigate the impact of corrosion by identifying metal thickness wear and tear before it leads to damage of critical metalwork. Corrosion can be very costly to a business if left unchecked by leading to costly repairs, prolonged maintenance, material losses, poor performance and, if left untreated, failure

Portamonitor Bearing Indicator: This is your ideal, quick to use, pocket-size tool for checking the lubrication and bearing wear and tear for rotating machinery, especially on pumps, motors and gearboxes

The Permalevel Multiplex provides fixed monitoring for fire suppression cylinders. It is designed for larger systems with over 5 cylinders and has advanced communications systems for remote data relay

Radio Wireless Addressable Alarm System

MAB Fire Protection Provides radio wireless addressable detective alarm system for businesses, and industrial centers all throughout Pakistan. MAB staff is fully licensed, highly trained and experienced to meet all your fire alarm needs. With MAB, one call does it all. We provide high quality services to clients all over Pakistan.

Wireless Fire Alarm Control Panel is designed for fire security, management and control of fire alarm devices. The usage of radio communication between the control panel and the fire detectors makes it suitable for installation into premises, where laying cables is unwanted.

Radio loop interface

Full analogue system facilities via wireless interface enables equipment to be sited where access is restricted or wiring is impossible.

INITIATING DEVICES

Radio Dual Optical/heat: Wireless Polar white addressable multisensor capable of operating in optical, temperature or multisensor, optical/heat modes. The detector is controlled from the main control panel via a loop wired radio interface module allowing both wireless and hardwired devices to be seamlessly located and controlled from the same wiring loop.

Radio dual optical/heat detector /w radio sounder base: An addressable, wireless, POLAR WHITE multisensor capable of operating in optical, temperature or multisensor modes. In addition it supports an integrated sounder, all controlled from the main control panel via a wireless radio interface is supervised and controlled from the main fire panel. Every wireless device is assigned its own IDENT address with which the main control panel communicates, providing the same system facilities as directly wired devices.

The sounder may be configured during installation for high (up to 87 dBA) or low (up to 74 dBA) sound levels, with selectable frequencies for two stage tone support, both warning and alarm tones. The tones are controlled from the COE in the same way as for hardwired sounders.

ZR432-2pav Radio dual optical/heat detector /w radio sounder base & red visual indicator: Addressable, wireless, POLAR WHITE multisensory is capable of operating in optical, temperature or multisensor modes. In addition it supports an integrated sounder with visual indicator, all controlled from the main control panel via a wireless radio interface.

WIRELESS SOUNDER/BEACON, CEILING MOUNT /W BATTERY PACK (RED W/ CLEAR FLASH): Wireless ceiling mount, addressable combination sounder/VAD (Visual Alarm Device) designed for indoor applications. It provides an audible and visual warning of a fire alarm condition in areas where the installation of cabling is not an option.

RADIO CALL POINT COMPLETE WITH BATTERY PACK (RED): A wireless, indoor, manual call point operating on 868 MHz. A manual means of initiating a fire alarm in areas where the installation of hard wiring is not an option. The unit is controlled from the main fire alarm panel via a loop wired radio interface module. This arrangement allows both wireless and hardwired devices to be seamlessly located on the same loop wiring.

24 X 7 SURVEILLANCE SERVICES

Fire can turn out to be lethal disasters for hundreds & thousands of people in nick of time, the effect of fire can be even devastating in terms of lives lost, injuries & damage to property.

What believed to be the best cure of Fire is **PREVENTION**. MAB took its initiative, stretched its domain of expertise by offering 24x7 Surveillance services to safety conscious companies, i.e. 24x7manned supervision &maintenance of Fire Systems. Our skilled & trained technical personnel always keep the areas under surveillance to make a place safer. It's a proactive remedy of reducing emergencies & saving precious lives & properties against Fire.

Deployment of Surveillance Staff

1.   FIRE CHIEF
The Fire Chief is responsible for minute to minute monitoring to ensure that loss of life, property or injury as a result of fire is prevented and/or minimized. He is responsible for directing all firefighters and ensuring that fire fighters have adequate training. The Fire Chief is also responsible for ensuring that firefighting equipment is monitored on a regular basis and is in good working order.

2.   FIRE SUPERVISOR
Continues observation of premises.To inspect/record the status of premises on regular basis. (As per guideline).To circulate the status of monitoring records on regular basis.To coordinate with Fire Fighter in locating exact location of affected area.To facilitate Fire Fighter for the evacuation plan for other staff working at the area.

3.   FIREMAN
The goals of firefighting are personal safety, saving lives, property and the environment.Fire fighting has some basic skills, prevention, rescue, savingproperty, and fire control. Firefighting is further broken down into skills which include size-up,Extinguishing, ventilation, salvage and overhaul.

4.   FIRE FIGHTER
Firefighter has to be in proper protective PPEs, i.e. Dungaree, Shoes, Gloves etc. while on duty.Our skilled & trained Fire Fighter always be vigilant & alert to cop up with any abnormal situation. He is responsible to inspect / record the status of Fire Extinguishers on daily basis& to inspect all areas on regular basis to find the hazards.

5.   FIRE TECHNICIAN
Fire Techniciancoordinates with Fire Fighter in locating exact location of affected area.To comply the evacuation plan for other staff working at the area.Firefighter shares the Daily Reportof any occurrence with the consultancy of Supervisor.

INSTALLATIONS/FACILITIES BEING MONITORED 24X7 BY MAB PERSONNEL

A.   Pak Telecom Mobile Limited (PTML UFONE)
Covering Ufone's 08 MSCs &22 BSCs located at core locations countywide.
No of staff deployed: 130

B.   PAKISTAN MOBILE COMMUNICATION LTD (MOBILINK)
Currently covering 30 Core Locations countywide, further expansion in nearfuture
No of staff deployed: 98

C.   OIL & GAS DEVELOPMENT COMPANY LTD (OGDCL)
Islamabad: OGDCL House, I-9 Complex, Medical Complex / Bobby Oil Field, Sanghar Sind
No of staff deployed: 62

D.   CIVIL AVIATION AUTHORITY (CAA)
Various CAA offices located at JIAP, Karachi
No of staff deployed: 10
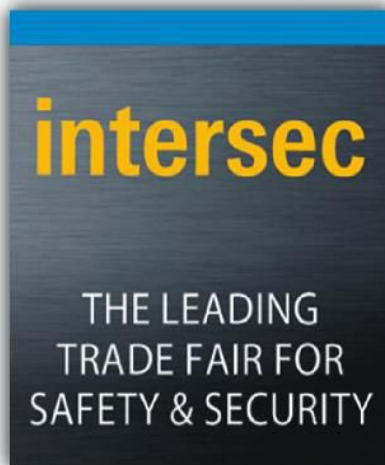
Management Review Meeting & Presentation

Dry Chemical Powder is filled Automatically using automatic Refilling Machine Present at MAB Facilities
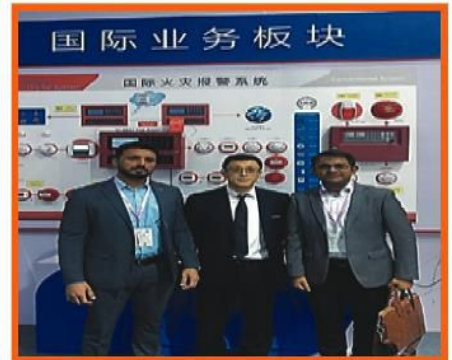

Co2 Gas Refilling System

Since 1982 MAB Fire is regularly and actively participating in exhibitions all around the world for safety security and Fire Protection. These exhibitions are leading international meeting platform for Fire Protection , safety and security.

MAB Fire Protection has now been engaged with monitoring & maintenance of the following system. To ensure best performance from BMS, BAS or WLD, It's essential to provide regular maintenance. All the mentioned system are considered as significant asset & lack of proper maintenance might cause this asset value to be eroded.

Building Management System

A Building Management System (BMS) is a control system that can be used to monitor and manage the mechanical, electrical and electromechanical services in a facility. Such services can include power, heating, ventilation, air-conditioning and physical access control, pumping stations, elevators and lights.

A well designed and managed Building Management System (BMS) provides great opportunities for improvements is energy efficiency by: * Enabling building managers to provide an optimal working environment consistent with maintenance a building's energy efficiency rating, * Early identification of equipment failure; * Identification of unusual pattern of energy usage, such as equipment being left on out of office hours; * Monitoring effectiveness of Energy Management Plans.

Burglar Alarm System

A Burglar Alarm is a system designed to detect intrusion, unauthorized entry into a building of area, Security alarm are used is residential, commercial, industrial and military properties for protection against burglary (theft) or property damage as well as personal protection against intruders, Car alarm likewise protect vehicles and their contents.

Some alarm system serve a single purpose of burglary protection; combination system provide both fire and intrusion protection. Intrusion alarm systems may also be combined with closed-circuit television surveillance system to automatically record the activities of intruders and may interface to access control system for electrically locked doors, System range from small, self-contained noisemakers, to complicated, multi-area system with computer monitoring and control.

Water Leakage Detection System

Water damage caused by leaks can cause serious damage over time if not treated. Water damage can cause all sorts of problems to data centers and mission critical facilities and if not caught in time by water leak detectors, can cost these business in million bucks.

Behind electrical failure, water leaks are the most common reason for data loss. These are all thing checked by building inspection when people are purchasing or leasing a building for business purpose. This is why you'll often see the most through building inspection with water leakages detection.

Our Valued Clients

Telecommunications Sector

HUAWEI · ufone · telenor · ZTE 中兴 · ptcl Hello to the future · ZONG Say it all · Mobilink · warid · wateen · PTA

Power Sector

KE · GEPCO · POWERCHINA · SECMC Sindh Engro Coal Mining Company · UCH POWER · HUBCO

Banking Sector

HBL · MCB · UBL where you come first · Summit Bank · Deutsche Bank · SILKBANK · khushhalibank limited · Standard Chartered · SME BANK GROUP · Bank Al Habib

BARCLAYS · Soneri Bank · faysabank · Atlas Bank · Meezan Bank The Premier Islamic Bank · askari bank · Allied Bank · ABN·AMRO · JS BANK · AMERICAN EXPRESS

Petroleum Sector

PSO · National Refinery Limited · PPL · Shell · PARCO · PUMA ENERGY · ENAR Petrotech

Insurance Sector

STATE LIFE · Jubilee · Allianz · efu LIFE · AIG

Government Sector / Miscellaneous Clients

PIA · CAA · HEC · The Institute of Chartered Accountants of Pakistan · Port · NICL · PAKISTAN · SSGC Sui Southern Gas Company Ltd.

Hospital Sector

INDUS HOSPITAL · Tabba Heart Institute · THE AGA KHAN HOSPITAL · Liaquat National Hospital & Medical College · DR. ZIAUDDIN HOSPITAL

Pharmaceutical Sector

NOVARTIS · Pfizer · Indus Pharma · gsk GlaxoSmithKline · Abbott

Industrial Sector

GulAhmed Textile Mills Limited · HINO · INDUS MOTOR COMPANY LTD · SOORTY ENTERPRISES · Unilever · PHILIPS sense and simplicity · KAM International · ASTRO PAK · LG · SUZUKI

Media Sector

ARY NEWS · EXPRESS NEWS · NEWS · e-paper جنگ · PTV news · PTV sports · SAMAA · وقت NEWS · KTN NEWS

Contractor

Thal Engineering A business of Thal Limited · DELTA ENGINEERING · extreme engineering system · aikes · SIS ENGINEERING

MAB INTERFACE (PVT.) LTD.

MAB Interface (Pvt.) Ltd., Since 1982 is a sister concern of MAB Group, Business activities are related to Electrical services, Power protection of your sensitive and highly valued electronic equipment and software management solutions.

We provide complete electrical solutions including Genset, Electrical Power DB's, Breaker Box, Electrical Wiring, Wiring Outlets, Installation, design & maintenance etc.
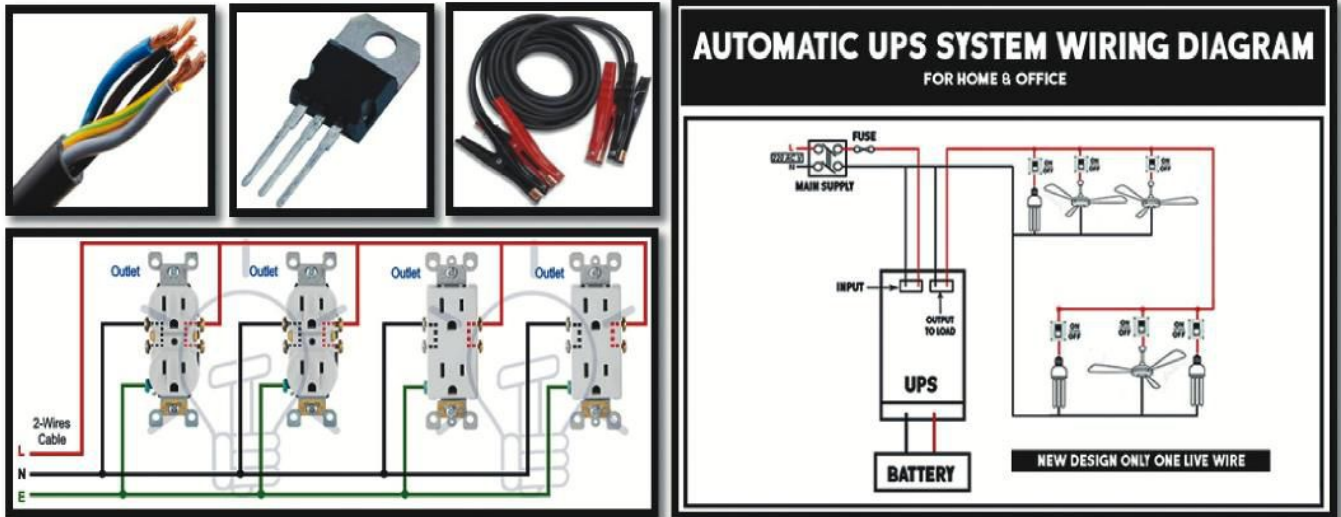
INFORM's principal products range includes:

- ➢ Uninterruptible Power Supply (UPS)
- ➢ Static UPS from 325 VA to 800 KVA
- ➢ Dynamic UPS from 150 KVA to 1670 KVA
- ➢ AC/DC Distribution Systems
- ➢ Rectifiers and Chargers
- ➢ Voltage Regulators, Static & Servo Controlled Type
- ➢ Transformers, Electric Boards
- ➢ Telecommunications Applications
- ➢ Static Transfer Switches

SOME OF OUR VALUED CLIENTS

PYRAMID PLUS SERIES

Uninterruptible Power Systems
True On-line Technology 3 Phase in – 3 Phase out / 10 to 300 KVA

- ❖ True on-line double conversion technology
- ❖ State of the art IGBT & PWM technology
- ❖ Evolution and redundancy guaranteed by Parallel Systems.
- ❖ Reliability of the battery ensured by info-Charger
- ❖ Fail safe battery back up
- ❖ Synchronization with external sources
- ❖ Built-in maintenance and static by pass
- ❖ Galvanic isolation and / or modification for special voltages
- ❖ Comprehensive communication with computer & network systems and SNMP solutions
- ❖ Communication with building management systems
- ❖ Expendable and variable battery blocks
- ❖ THCDL and 12 pulse rectifier options
- ❖ Low installation and operation cost

INFORMSOL SOLAR PANELS
Description:
- ❖ Highly sufficient and stable polycrystalline solar panel
- ❖ Different power output available, range from 5 Watt to 100 Watt
- ❖ Comes with junction box and by pass diode
- ❖ Charge 6V and 12V batteries of all type. Can be used as power source for power static or battery charger for vehicle, boat, electric fence, pump….
- ❖ Multiple pieces can be connected to acquire higher power

Lamination:
- ❖ Anodized aluminum alloy frame
- ❖ Low iron high transparency temper glass cover
- ❖ Solar cell embedded in EVA (ethylene vinyl acetate)
- ❖ Tedlar foils backing

Ps8000 Distribution Frame (180 amp)
Rd2000 Rectifier Modules

Inform PS8000, 180A DC Supply has been designed for GSM stations, telecom applications and other communication application PS8000 System is used in DC energy required application areas together with charging facility. 180A DC energy distribution system creates the -48VDC energy for the critical loads.

The system is composed of parallel redundant operating and forced current sharing RD2000 series rectifiers, AC distribution, DC distribution and Battery Bank. PS8000 Power

System can be supplied from both three or single phase mains.

Additionally depending on request, PS8000 system is available to be connected in parallel system.

RS232 communication port, RS485 port for the communication with other DC frames, monitoring through use friendly intelligent LCD display, availability to locate & rectifiers in single frame and to connect 6 frames in parallel.

RD2000 RECTIFIER SYSTEMS
Inform rectifier is powered from single phase AC, providing DC output voltage to the supply of the critical loads and charging facility of batteries.

The switch-mode technology ensures the high efficiency of the equipment, allowance accurate control, fast dynamic response and keeping is small, light and quits.

- ❖ Wide input voltage range
- ❖ High power factor
- ❖ Switch-mode technology
- ❖ Redundant operation
- ❖ Hot-swappable
- ❖ Rectifier status control through main CU
- ❖ Status LEDs on each module
- ❖ Compact and Light Size.

GUARD_S COMPACT SERIES
Line interactive Technology
600VA to 3000VA (Tower Model)
2000VA to 3000VA (Rack Model)

- ❖ Microprocessor controlled line interactive Technology
- ❖ Boost and Buck Automatic Voltage Regulation (AVR)
- ❖ Advanced Battery Management (ABM)
- ❖ Short Circuit and overload operation
- ❖ Lightening and surge protection
- ❖ Communication Port and Remote Monitoring Software.

INFORMER SERIES
Line Interactive Technology with Sinewave Output
1000VA/2000VA/3000VA (Tower & Rack Models)

- ❖ Pure sinewave output for any critical load.
- ❖ High Battery Charging Capacity
- ❖ Extended back up time with battery pack
- ❖ Overload protection
- ❖ Short circuit protection
- ❖ Monitoring Software
- ❖ Rack Version available

GREEN DSP SERIES
On-Line Double Conversion "3Level Inverter" Technology
I Phase in-I Phase out, 3 to 10 KVA

- ❖ On-line Double conversion "3Level Inverter" Technology
- ❖ Real Digital Signal Processor (DSP) controlled IGBT Technology
- ❖ High AC-AC Efficiency (94%)
- ❖ High Output power factor (0.9)
- ❖ Increased Input Power Factor (p.f> 0,99)
- ❖ Transformer less design, Compact dimensions,
- ❖ Event Log Display up to 500 Events,
- ❖ Availability to configure as 50/60Hz Frequency Converter from LCD Panel,

DSP FLEXIPOWER SERIES
On-Line Double Conversion Technology
IPhase in / I Phase out 3KVA to 10KVA

- ❖ On-Line Double Conversion Technology
- ❖ Power factor correction
- ❖ High output power factor
- ❖ Parallel redundant operation up to 4 units (excluding 3KVA)
- ❖ Low Total Harmonic Distortion (THD) level
- ❖ Transformerless Design
- ❖ Energy Saving Mode (Ecomode)

DSP MULTI POWER SERIES
Uninterruptible Power Systems
True On – Line "Double Conversion" Technology
I Phase in – I Phase out – from 5 KVA to 10 KVA

- ❖ On-Line Double Conversion Technology
- ❖ Increased Input Power Factor (>,99)
- ❖ Convertible display helps to use both for tower and rack applications
- ❖ High Performance with the PWM Sine wave topology

SINUS SERIES
Uninterruptible Power Systems
True On – Line "Double conversion" Technology
I Phase in, I Phase out
700 VA to 3000 VA

- ❖ Pure sinewave output less than 3% THD
- ❖ Wide input voltage range +27% of nominal
- ❖ Power factor correction
- ❖ Genius battery management (GBM)

AVR SERIES
Single Phase (2-30 kVA)
Three Phase (6-1000kVA)

- ❖ Servo Motor Controlled Technology
- ❖ Fast Response for Fluctuations
- ❖ Reliable Stabilization for Secure Energy
- ❖ High efficiency in each model
- ❖ Short circuit protection
- ❖ Ability to work with non-liner loads
- ❖ Manual Bypass Switch
- ❖ Wide input voltage range version (optional)
- ❖ Electro-mechanic (breaker module) high-low voltage protection (optional)
- ❖ Output isolation Transformer (optional)
- ❖ Digital Display option available
- ❖ Higher IP applications are available.

SVR SERIES
Static Voltage Regulator
Single Phase (5-30 kVA), Three Phase (5-120 kVA)

- ❖ Thyristor Controlled Technology
- ❖ Microprocessor Controller
- ❖ Wide Input Voltage Range
- ❖ Reliable Output Voltage Stability
- ❖ Overload Capability up to 130% Load
- ❖ Electronic Control
- ❖ Swift response to voltage fluctuations
- ❖ High efficiency
- ❖ Manual Bypass Switch
- ❖ Operation Capability at High
- ❖ Temperature and Humidity
- ❖ Short Circuit and Overload Protection

DSP MULTIPOWER SERIES
Online Double Conversion Technology
3Phase in / I Phase out – 15kVA & 20kVA

- ❖ On-line Double Conversion Technology
- ❖ Real Digital Signal Processor (DSP) Controller
- ❖ N+I Power Scalable Parallel Redundancy
- ❖ Parallel Connection Availability up to 4 units
- ❖ Increased Input Power Factor (O,95)
- ❖ Transformeriess Design
- ❖ Energy Saving Mode (Green Mode)

MAMUN ALI BUMASUK (PVT.) LTD.

Above parent company of MAB GROUP was established in 1982, and is the only facility in Pakistan providing lifesaving and firefighting sale and servicing in the country. Authorized by the large numbers of world's renowned Life raft and other marine safety equipment manufacturers and approved by Ministry of Ports & Shipping Govt. of Pakistan as well as Class NKK and ISO 9001:2015 certified company.

SERVICING FACILITIES:

We have fully equipped and qualified trained staff for carrying out servicing, repairs and inspection of all sizes and types of life rafts, lifeboat and other marine safety equipment and firefighting appliances.

LIFERAFT MANUFACTURERS

1	RFD SURVIVA	8	SHANGHAI YOULONG	15	REVERE SURVIVAL
2	RFD TOYO	9	SHANGHAI HAIAN	16	BF GOODRICH
3	D.S.B.	10	SHANGHAI CUNHONG	17	VIKING
4	FUJIKURA COMOSITES	11	SHANGHAI DACHENG	18	UNIRAFT
5	SUMITOMO	12	JIANGSU HAINING	19	AUTOFLUG
6	MITSUBISHI	13	NINGBO CRV	20	U.S.C.G.
7	SHANGHAI STAR RUBBER	14	SWITLIK		

LIST OF MAJOR CLIENTS

A). LOCAL SHIPPING COMPANIES / AGENTS

1. Pakistan National Shipping Corporation.
2. Karachi Port Trust.
3. Port Bin Qasim Authority,
4. Asia Marine (Pvt.) Ltd.
5. Gac Pakistan.
6. COSCO Shipping.
7. Delta Shipping (Pvt.) Ltd.
8. General Shipping (Pvt.) Ltd.
9. Seatrade (Pvt.) Ltd.
10. Trasntrade (Pvt.) Ltd.
11. Wilhelmsen Ship Services.
12. Blue Marine Services.
13. Ocean Services (Pvt.) Ltd.
14. Ocean World (Pvt.) Ltd.
15. World Wide Marine Services.
16. Bulk Shipping (Pvt.) Ltd.
17. Project Shipping (Pvt.) Ltd.
18. Crystal Sea Services (Pvt.) Ltd.
19. Alpine Marine Services.
20. Universal Shipping (Pvt.) Ltd.
21. Eastwind Shipping (Pvt.) Ltd.
22. Golden Shipping (Pvt.) Ltd.
23. Unicorn Marine Services.
24. Seamax Shipping.
25. All other Organization/ Firms involved in Shipping Industries

B). FOREIGN SHIPPING COMPANIES / AGENTS

1. Hansa Safety Services.
2. Drew Marine Safety.
3. Zodiac Maritime Ltd.
4. Cobalt Blue Ltd.
5. I.Q.M.S Ltd.
6. Epsco Cyprus Ltd.
7. Ijin Marine Ltd.
8. Palmarine Hellas.
9. Lalizas Hellas.
10. Fujikura Composites.
11. Valmarine Services S.A.
12. Smit Lamnalco B.V.
13. Executive Ship Management (Pvt.) Ltd.
14. PrinSeaPals Marine Services.
15. Oldendorff Carriers GmbH & Co. KG.
16. Mazovia Investments Inc.
17. Helikon Shipping Ltd.
18. Bernhard Schulte Shipmanagement.
19. New Shipping Kaisha (Pvt.) Ltd.
20. Wei Fong Shipping Co., Ltd.

MARINE LSA, FFA& FIXED FIRE SYSTEMS

MARINE FIRE DETECTION, SUPPRESSION AND ADDRESSALE SYSTEMS
ENGINEERING, SALES AND SERVICES ON BOARD SHIPS

We, **Mamun Ali Bumasuk (Pvt.) Ltd,** have been providing above services for the last 34 years now,on Board ships. Approved by the Government of Pakistan, ministry of Ports and shipping. While having strategic locations across Asia, we are keen to serve your needs promptly &proficiently. We are authorized distributors and service providers for,

▶ **UTC Fire,**	United Kingdom	(Conventional, Addressable Fire Alarm Systems)
▶ **UNIPOS,**	Bulgaria	(Conventional, Addressable Fire Alarm Systems)
▶ **Tyco Fire,**	United Kingdom	(FM200 Fire Suppression systems)
▶ **SEVO SYSTEMS,**	USA	(Novec-1230 Fire Suppression systems)
▶ **FIRETRACE,**	USA	(FM200,Novec-1230 Fire Suppression systems)
▶ **AMEREX,**	USA	(Halotron, DCP& CO2 Fire Extinguishers)

Proficient expertise in,

▶ Complete solution for Marine Fire Safety equipment (Sales & service)
▶ Certified Service Station by the Ministry of Ports & Shipping
▶ Fully equipped trained & qualified staff for carrying out installation, service & repair jobs.

SKILLED WORKFORCE

Maintaining standards set by the IMO for SOLAS & keeping accreditation by ISO 9001:2008, & holding overall work force of 200+ qualified & competent personnel along with facilities equipped with latest equipments & gadgets, MAB is ambitious to serve its clientele with a sheer professional edge.

ALLOW US TO SERVE YOU & EXPERIENCE THE DIFFERENCE

Life raft Foreign Training Certificates

Foreign Principals in Pakistan for Liferafts Manufacturer

Foreign Shipping Companies / Agents

Local Shipping Companies / Agents

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