

## Product Inside



**Unique Multi Engineering Ltd.**

A Firm of Fire Detection, Protection, Ventilation & Cooling System Solution

[www.unique-ltd.com](http://www.unique-ltd.com), [fb/UniqueMultiEngineeringLtd](https://fb.com/UniqueMultiEngineeringLtd)

## About us

### Background

UNIQUE MULTI ENGINEERING LTD. as a Professional Engineering Firm in Bangladesh. We've vast experience and resources to provide Fire Detection, Hydrant, Sprinkler, structural, electrical, mechanical design based consultancy services and turnkey based product Supply & Installation solution to the clients. We are the authorized Agent of Nittan, Firex and distributor of (SFFECO, PCJ, EBITT, Rapidrop) fire detection & protection brands in Bangladesh. Since its establishment in 2013, UNIQUE MULTI ENGINEERING LTD. it's highly skilled & professional engineers and other technical staffs are working round the clock to provide the best possible services to its valued customers maintaining highest level of quality of products and efficient customer service.

### The company activities to serve its clients are :

Mechanical, Electrical, Procurement, Manufacturing of components, Assembly and testing on site one board section and commissioning Indenting of Engineering Equipment, Plan, Machinery, Utility and service, after sales service.

These activities are carried out combined in a project.

### Our scope of supply and services :

- \* Fire Detection System
- \* Fire Hydrant & Sprinkler System
- \* Fire Rated Door (Local or UL)
- \* Fire Safety Accessories
- \* Suppression System
- \* Evaporative cooling system
- \* Ventilation system
- \* Electrical Safety equipments
- \* Lighting Protection System

# Fire Fighting System

## Fire Detection System



### Heat Detector:

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Multi Detector:

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Smoke Detector:

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Detector Base:

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Input-Module:

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Out put-Module

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Manual Call Point:

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Sounder with Flash:

Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Fire Alarm Control Panel:

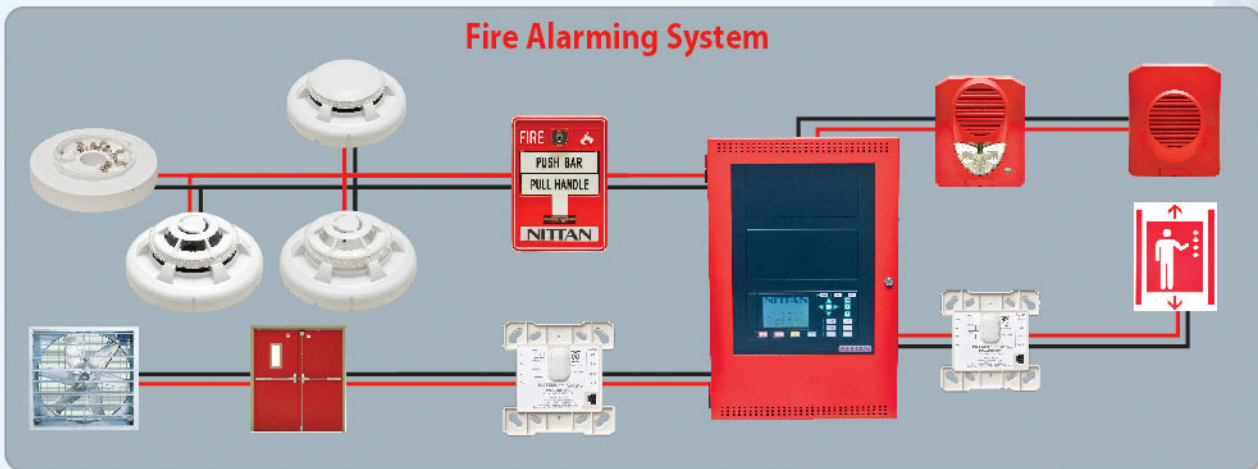
Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan



### Sounder:

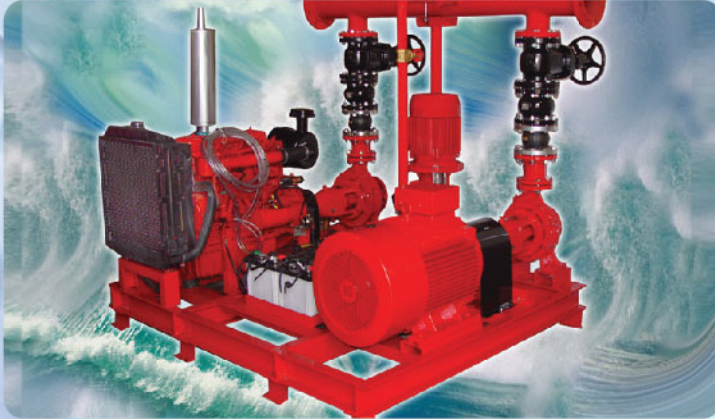
Brand: Nittan  
Origin: UK  
Certification: UL / EN 54  
Technology from Japan

## Fire Alarming System



## Fire Protection System

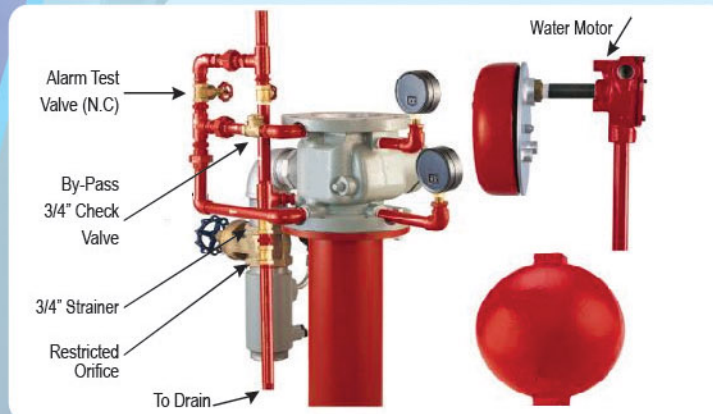
### Fire Pumps



A fire pump is a part of a Sprinkler/Hydrant system's water supply and can be powered by electric and diesel. The pump intake is either connected to the public underground water supply piping, or a static water source (e.g. tank, reservoir, lake) The pump provides water flow at a higher pressure to the sprinkler system risers and hose standpipes.

**Brand:- Firex/Ebitt, Origin:- UAE/Turkey**

### Wet Alarm Valves



CE, LPCB, UL, FM  
Available in sizes 80mm upto 200mm  
Flanged or grooved connections  
Pre trimmed to FM or LPCB Specification  
Alarm gongs  
Optional retard chamber

**Brand:- Firex/Rapidrop, Origin:- UAE**

### Fire Hydrant & Sprinkler System



Conventional sprinklers produce a spherical water discharge pattern and the Pendent / Upright produce a hemispherical water distribution pattern below the deflector. In a fire condition the heat causes the fluid in the glass bulb to expand which shatters the glass and releases the spring seal assembly. Water flows from the orifice onto the sprinkler deflector which diffuses the water into a uniform spray pattern which extinguishes or controls the fire.

**Brand:- Firex/Rapidrop, Origin:- UAE**

# Fire Fighting System

## Fire Hydrant System

Brand:- Firex/Rapidrop, Origin:- UAE



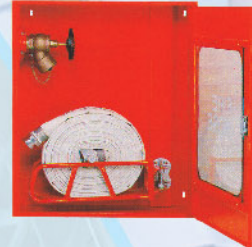
Pressure Relief Valve



4-way Breeching inlet



Landing Valve



Fire Hose Cabinet



Pressure Regulating Valve



Pillar Hydrant



Y-Strainer



Non Return Valve



Gate Valve (OS & Y)



Automatic Fire Extinguisher



Extinguisher



Fog Light & Emergency Exit Light



Door Accessories (UL)



Fire Proof Door (Double)

## Evaporative Cooling System

Brand: JH Cool, Origin: China

### Details:

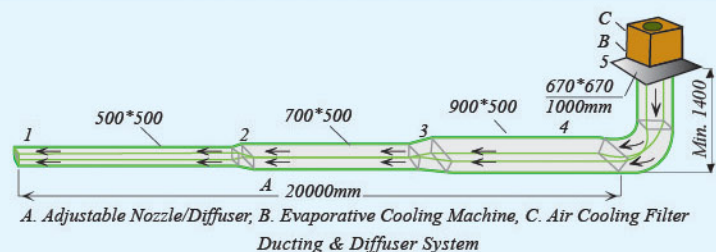
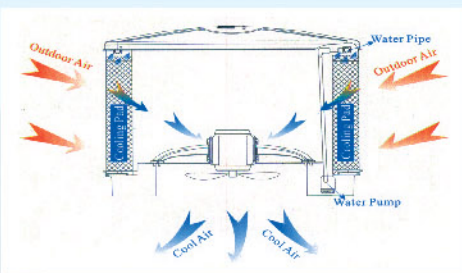
Evaporative cooler is a device that cools air through the evaporation of water. Evaporative cooling differs from typical air conditioning systems which use vapor-compression or absorption refrigeration cycles.

Evaporative cooling works by employing water's large enthalpy of vaporization. The temperature of dry air can be dropped significantly through the phase transition of liquid water to water vapor (evaporation), which can cool air using much less energy than refrigeration. In extremely dry climates, evaporative cooling of air has the added benefit of conditioning the air with more moisture for the comfort of building occupants.

The power consumption is only 1/8 of the traditional air conditioner. Widely be used in internet cafes, base station, factory, supermarket etc.



Model	JH18AP-31Y3-2	JH18AP-10Y3-2	JH18AP-18Y3-2
Airflow(m <sup>3</sup> /h)	18,000	18,000	18,000
Pressure(Pa)	180	180	180
Speed	1	16(TRAIC)	16(Inverter)
Power Source(V/Hz)	3PH, 380/50	1PH, 220/50	1PH, 220/50
Power(kW)	1.1	1.1	1.1
Fan Type	Axial	Axial	Axial
Noise(dB(A))	≤73	≤73	≤73
Water Tank(L)	30	30	30
Water Consumption(L/H)	15-20	15-20	15-20
Dimension(mm)	1160*1160*1760	1160*1160*1760	1160*1160*1760
Air Outlet Size(mm)	600*355	600*355	600*355
Air Discharge	Top	Top	Top
Control Type	LCD+Remote	LCD+Remote	LCD+Remote
Clean Type	Manual	Manual	Manual
Net Weight(kg)	90	90	90
Coverage(m <sup>2</sup> )	100-150	100-150	100-150



Evaporative Cooling Systems is designed accurately and works properly then this is the best solution for Production floor compare to Air Conditioning System because:

- \* This reduces temp. 7-10 Deg C from ambient temperature.
- \* Saves running cost as electricity consumption is very less.
- \* Not required to install/run ceiling fan,
- \* Saves huge electricity and running cost.
- \* Circulates always fresh and cold air so increase workers efficiency.
- \* Save environment as no CFC emission.
- \* Save maintenance cost



## Ventilation System

### Natural Ventilation System

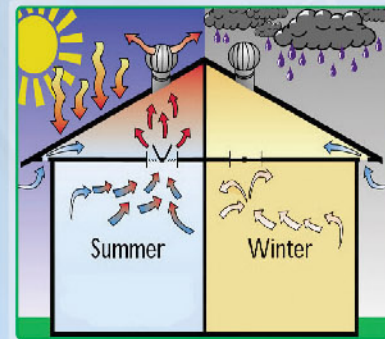


1. Determine volume of space to be ventilated  
Volume (ft<sup>3</sup>) = L x W x H  
Where L = Length, W = Width, H = Height of building
2. Select Air change Rate from Table A
3. Calculate required ventilation rate Q (cfm)  
$$Q \text{ (cfm)} = \frac{\text{Volume (ft}^3\text{)} \times \text{Air change Rate}}{60}$$
4. Determine number of ventilators =  $\frac{\text{Ventilation Rate Q}}{\text{Exhaust Capacity}}$

A Model to Selection:

Building dimensions with L = 100ft, W = 60 ft, H = 20 ft  
Volume (ft<sup>3</sup>) = 120000 ft<sup>3</sup>  
Air change Rate selected = 12 per hour  
$$\text{Ventilation rate Q} = \frac{120000 \times 12}{60} = 24000 \text{ CFM}$$

Refer Table B, Select suitable Model from table is AV-600  
Exhaust capacity = 1972 CFM  
Under wind velocity of 8 mph, temp diff of 5 degrees,  
stack height = 20 ft Selection is 12 Nos. of AV-600



### Power Exhaust Fan



The precise design, excellent technique, Five production and perfect service have won users recognition and good credit and mode a steady and solid foundation for its further development.

High pressure, Strong replacement Air flow, low noise energy saving, precise design, excellent technique, good looking industry blower to exhaust hot dusty air and give you good ventilation.



Model	Dimension (mm) HxWxD	Fan Diameter (mm)	Motor Speed (RPM)	Blade Speed (RPM)	Air Flow Rate (m3/h)	Noise (dB)	Power ( kW)	Rating Voltage (v)	Weight (kg)
EF-1 (54")	1380X1380X400	1270	1400	450	44500	65	1.1	380	85
EF-2 (48")	1220X1220X400	1110	1400	460	38000	65	1.1	380	65
EF-2 (44")	1100x1100x400	1000	1400	460	35000	65	0.75	380	60
EF-3 (40")	1000X1000X400	900	1400	610	25000	65	0.75	380	55
EF-4 (30")	780X780X400	710	1400	960	23000	65	0.55	380	45

## Security System



IP Camera



CC Camera



CC Camera



NVR (HD Video Recorder)



Access Control



## Unique Multi Engineering Ltd.

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