



شركة سمارت تكنولوجي
SMART TECH CO.

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شركة سمارت تكنولوجي

Safety - Security - Engineering

هندسة - الأمن - سلامة

Activities of Smart tech in Projects.

- Material Supply.
- Fire Detection & Protection System.
- Fire Fighting System.
- Access Control & Premises Security Systems.
- Public Address & CCTV System .
- Electrical and Electronic Component.
- Generators.
- Gas and Water Leak Detection System.
- Mechanical Works For Building and Public facilities.

أنشطة سمارت تيك في المشاريع

- توريد المواد.
- نظام الإنذار عن الحرائق والوقاية منها.
- نظام مكافحة الحرائق.
- أنظمة الأمن والتحكم في دخول المباني.
- أنظمة مكبرات الصوت والدوائر التليفزيونية المغلقة.
- الأجهزة الكهربائية والإلكترونية.
- المولدات الكهربائية.
- نظام الكشف عن تسريبات الغاز والمياه.
- الأعمال الميكانيكية للمباني والمرافق العامة.

INTRODUCTION.

Smart Tech Company is Saudi national, specialized in supply Installation & Maintenance, Commissioning of the Electro & Mechanic System Smart Tech Company has high professional powerful technical team of Engineers, technicians.

OUR MISSION .

Provide the highest quality service to our clients by combining highly – skilled team members with our supported policy Struggle to support our project with the most advanced technology to ensure we take advantage of the efficiency and accuracy that it offers . Support our Employees in a way that promotes learning, growth and recognition for superior performance.

OUR VALUES

Act with Honesty and Integrity
Constantly Focus on Safety and Quality.
Respect for our Employees ,Clients, Partners, Vendors, Subcontractors.

مقدمة

شركة سمارت تيك هي شركة سعودية وطنية، متخصصة في توريد وتركيب وصيانة وتشغيل الأنظمة الكهربائية والميكانيكية، كما تمتلك شركة سمارت تيك فريق تقني عالي الكفاءة من المهندسين والفنيين.

مهمتنا

تقديم أعلى مستوى من الخدمات لعملائنا من خلال الجمع بين أعضاء الفريق ذوي المهارات العالية والسياسة المدعومة لدينا. المكافحة والعمل الجاد لدعم مشروعنا بأحدث التقنيات لضمان الاستفادة من الكفاءة والدقة التي يوفرها. دعم موظفينا بطريقة تعزز التعلم والنمو والاعتراف بالأداء المتفوق.

قيمنا

التصرف بأمانة ونزاهة.
التركيز باستمرار على السلامة والجودة.
احترام موظفينا وعملائنا وشركائنا وموردنا ومقاولينا من الباطن.



BELDEN

SENDING ALL THE RIGHT SIGNALS







TYPE OF EXTIGUISHER





4000 Series Visual Nurse Call System

- **UL 1069 System**
- **Established market recognition**
- **Component Flexibility**
- **Most Reliable and Economical Nurse Call System for Today's Senior Housing Environment**





CCTV CAMERA ADVANCE SYSTEM





ACCESS CONTROL SYSTEM





CAME
AUTOMATIC GATES

Came Products Series

CAME Barrier System



G2500, G40000 & G5600



G8000



G12000

CAME Sliding Gate System



BX 400-800kg



bk 1200-2200kg



bk 3500kg

CAME Swing Gate System



ATI 3000-5024



Ferni F1000-F1100



Frog-A, Frog-AV & Frog-A24



GENT

by Honeywell

Control Panel

A one to two loop panel accommodating up to 200 devices per loop.

LCD display allows clear indication of fire or fault location.

Site specific fire plans can be programmed to meet the evacuation needs of the building.



Vigilon Compact Control Panel

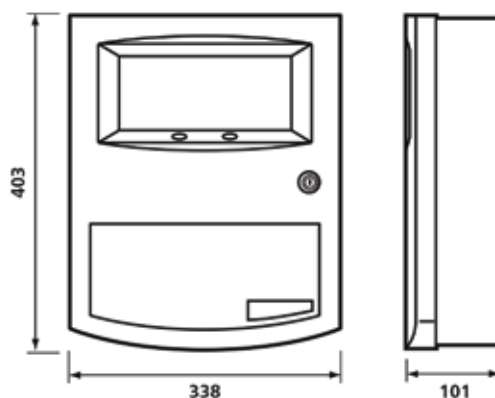
TECHNICAL SPECIFICATION

Type	Control panel
Loop Capacity	200
Ingress Protection	IP31
Approx Weight	16.6 Kg (with batteries)
Operating Temperature	0°C to +45°C
Relevant Standards	EN54 Pt 2 & 4
Batteries	2 x 12V @ 12 Ah
Battery Standby	24 Hours + 30 minutes alarm
Supply Voltage	216V – 253V 50Hz
Power Consumption	140 W
Cable Entry	Top and rear knockins
Auxiliary Contacts	Programmable to activate on Fire, Fault or Disablement (1 x SPCO, 1 x DPCO)
Sounder Circuits	2 circuits @ 250mA each
Monitored input	1 input which is programmable to perform a logical action via a command build
Communication ports	2 x RS485, 1 x RS232 selectable functions
Approvals	LPCB Applied for

ORDER CODES

Control Panel	COMPACT-24
LCD Repeat panel	COMPACT-RPT
Flush fixing frame	COMPACT-FLUSH
Additional Loop card	COMPACT-LPC
Optical only sensor	COMPACT-O
Stainless Steel Options:	
Stainless steel door	VIG-RPT-DOOR-SS
Stainless steel flush frame	COMPACT-FLUSH-SS

Dimensions (mm)





Advanced features for greater

Addressability

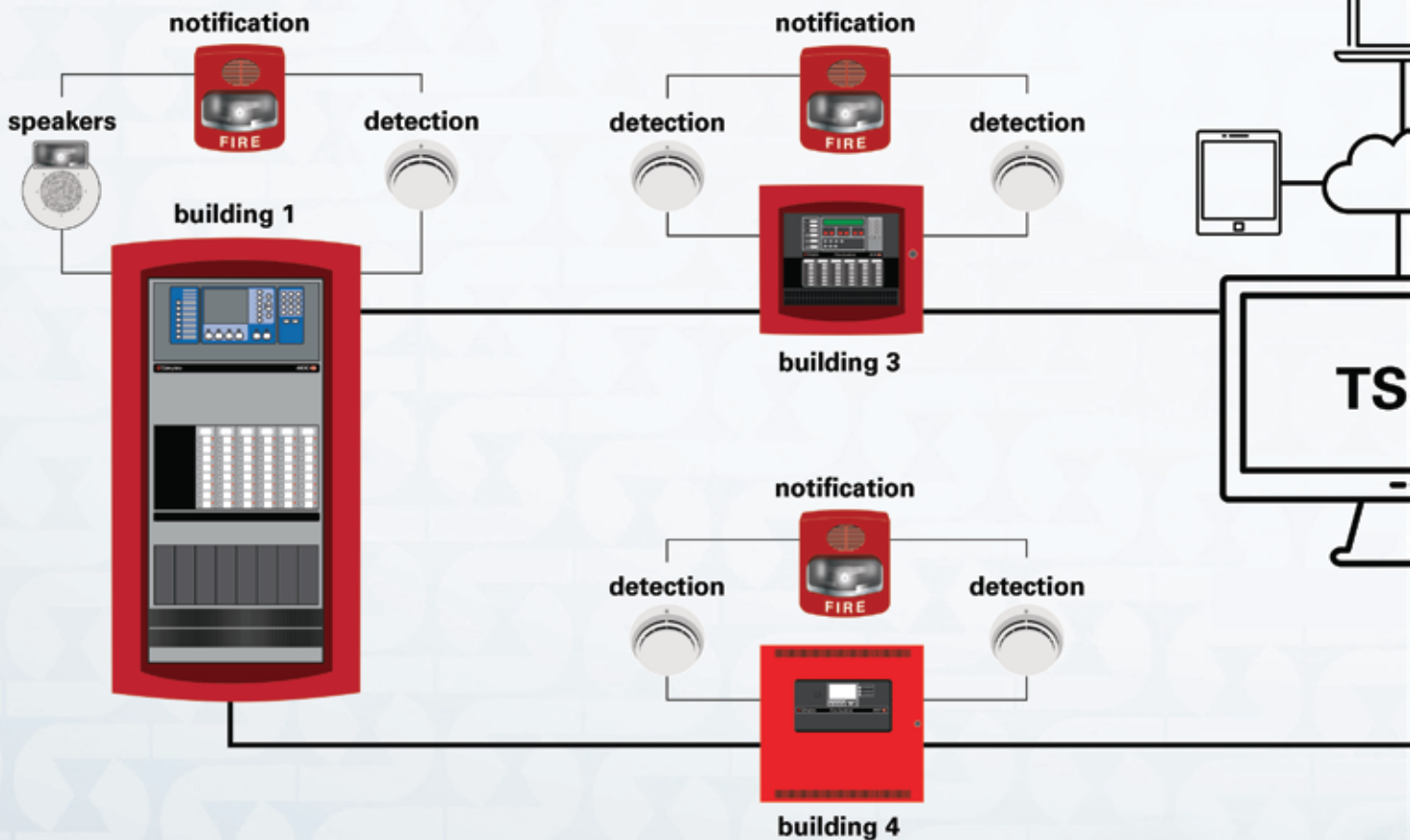
Many Simplex fire alarm control panels feature smarter design, better fault tolerance and intelligent addressability, which allows them to manage and integrate with addressable detection and notification devices. This lets you supervise each device for malfunction or failure – plus customize individual device settings – all from your control panel.

Modular design

Simplex fire alarm control panels can be custom-configured to each facility's specifications and capacity requirements. As an additional convenient option, Simplex 4100ES panels are custom-built so they are ready to connect upon arrival.

Intuitive interface

Connect to your panel through the PC-based TrueSite Workstation command center or TrueSite Mobile Client app, which allows you to easily access information from your mobile device and perform a number of operations.





protection, easier operation.

Integration with building systems

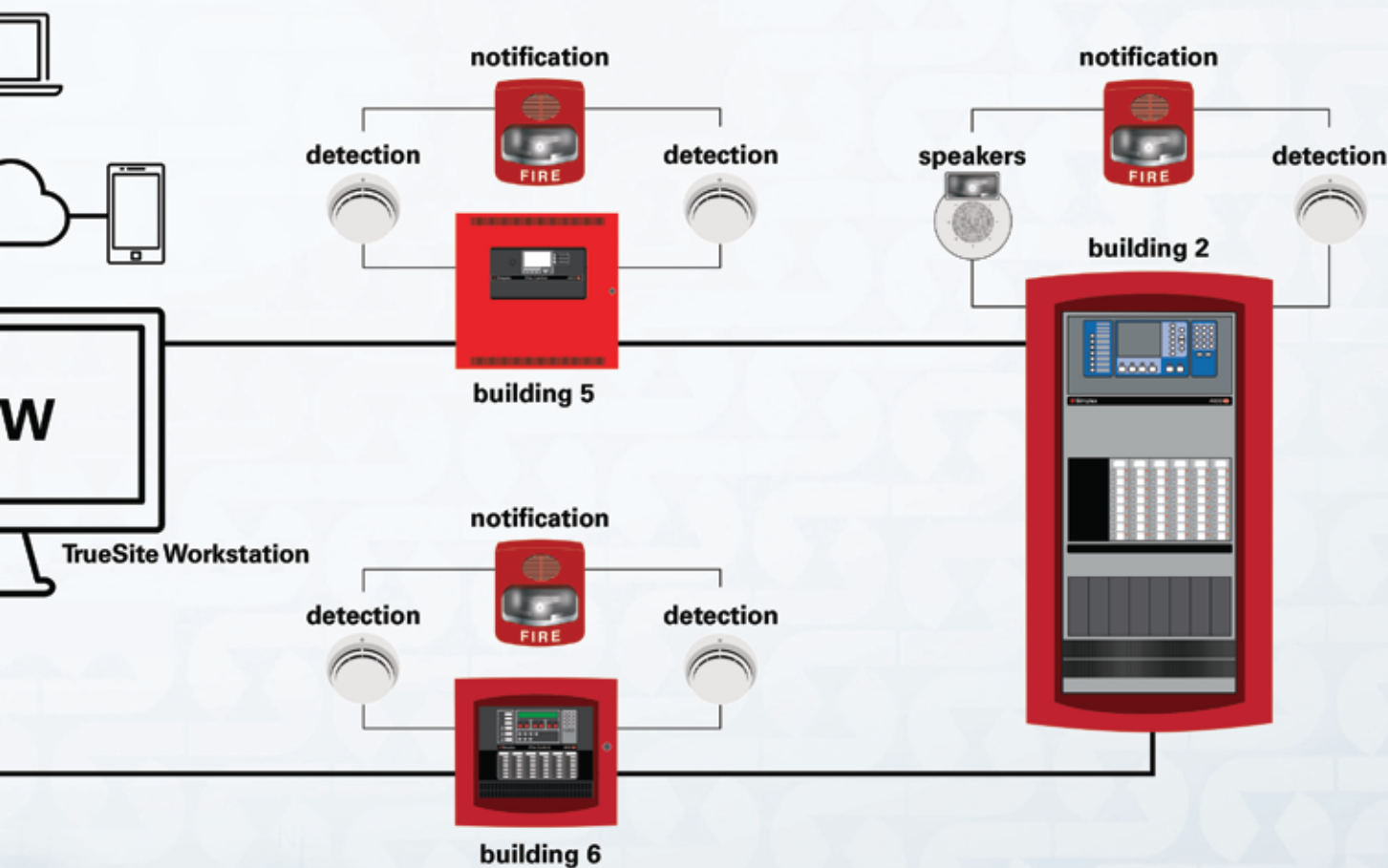
Simplex fire alarm control panels integrate with other systems, such as Johnson Controls' *Metasys*® building automation system and security systems, which enables the sharing of information and centralized facility control. In addition, you can create a multifaceted emergency response by linking your fire protection system with elevators, door holders, smoke dampers, air pressurization systems and more. Simplex control panels also support popular communication protocols such as BACnet and Modbus.

Future-proofing/upgradeability

The modular design of Simplex panels allows them to incorporate future upgrades and technologies, which makes them ideal for easy and fast expansions.

Regulatory compliance

Simplex fire alarm control panels are UL and ULC listed and comply with a wide variety of industry and jurisdictional requirements.





VIKING®

TECHNICAL DATA

MULTI-HAZARD RELEASE CONTROL PANEL MODEL VFR400

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

The Viking VFR400 is a microprocessor based multi-hazard releasing control panel for use on preaction, deluge, Surefire®, Firecycle® multicycle sprinkler systems, MX-1230 Fire Extinguishing System, and MX-200 Fire Extinguishing System. The Model VFR400 is Underwriters Laboratory listed, FM Global approved and complies with UL Standard 864, Ninth Edition, for Local Control Units for Releasing Service. It is designed to be compatible and installed in accordance with the requirements of NFPA 13, NFPA 15, NFPA 16, NFPA 72, and NFPA 2001.

The VFR400 is housed in a steel cabinet with removable door and key lock. Standard is red with black and white trim. The panel is available for use with either 120 VAC or 220 VAC for primary power. The cabinet will house up to two (2) 12AH standby batteries, which are capable of powering the unit in excess of 90 hours in the event of an AC power failure. For (2) 18AH batteries, a separate battery box (Part Number 09866) must be used. The VFR400 Release Control Panel can be used with a wide range of compatible initiating devices, such as spot heat detectors, smoke detectors, and linear heat detectors (10,000 ft. - SAFE-FIRE) or (3,500 ft. - Protectowire).



A. Features




- Multi-Hazard Operation
- Supervised Microprocessor
- 32 Character Alpha-Numeric LCD Display
- Custom Banner Message Text
- Custom Zone Description Text
- On Board Menu Driven Programming Controls
- Releasing Circuits Protected from False Activation
- Four Class B Initiating Circuits
- Two Class B Supervisory Circuits**
- Four Class B Output Circuits
- Programmable Cross Zoning
- Continuous or Timed Discharge
- 40 Event History Buffer
- Walktest with Automatic Time-out
- Alarm, Trouble, Supervisory Waterflow Relays
- Optional Class A Output Zone Module
- 21 Standard Programs in Panel Memory
- Password Protection for all Programming
- 24 Hour Clock
- Supervised Remote Annunciator Output up to three (3)
- Auxiliary 24 VDC Power (Constant and Resettable)

See Installation Manual

21 standard programs-Program option for Viking Preaction, Deluge, Surefire® Preaction and Firecycle® Sprinkler Systems.

**Can be used for Supervisory, Tamper, Low Air, High Air, or Abort Switch (Abort switch for MX-1230 or MX-200 Systems).

2. LISTINGS AND APPROVALS

-  **UL Listed:** Meets UL Standard 864 - 9th Edition
- UL Listed:** Clean Agent Extinguishing System Unit
-  **FM Approved:** Deluge Systems, Preaction Systems, Multicycle Systems, Refrigerated Area Sprinkler Systems
- FM Approved:** Control Panel Group 4
- FM Approved:** Clean Agent Extinguishing System Unit
-  **CE Certified**

3. TECHNICAL DATA

Specifications:

A. Environment

- Temperature: 32 °F to 120 °F (0 °C to 48 °C)
- Humidity: 93% non-condensing

Scan with smart phone to access technical and troubleshooting resources.



Viking Technical Data may be found on The Viking Corporation's Web site at <http://www.vikinggroupinc.com>. The Web site may include a more recent edition of this Technical Data Page.





NOVEC 1230

Gaseous Fire Suppression Solution



Focused Fire Protection

NOVEC 1230 is the next generation of chemical fire suppressant in place of FM200 which was a market leader for the exchange of Halon 1301. These systems are designed to extinguish fires involving flammable liquids, gases and electrical equipment therefore protecting hazards particularly in applications where high margins of safety and long term sustainability are considered important.

NOVEC 1230 is a colourless and low odour fluid with a density around 11 times greater than air. Systems are designed to hold the NOVEC 1230 in the form of a liquid and nitrogen which is used to super-pressurise the container to 24.8 bar (360 psi) at 20°C. When the system is activated the contents flow into the distribution pipework to the discharge nozzle(s) where it is rapidly dispersed as a vapour (less than 10 seconds). During the discharge the enclosure will be fogged which may reduce visibility. This normally clears rapidly and should not obstruct the ability of personnel to safely exit the protected area. Like most other chemical agents, it rapidly extinguishes through a combination of heat absorption (its main action) and some chemical interference with the flame. It does not significantly deplete the oxygen content in the room and tests have shown it to be less toxic than Halon 1301.

// Environmental Features

NOVEC 1230 contains no bromine or chlorine and therefore has an ozone depleting potential of zero. The atmospheric lifetime of NOVEC 1230 fluid is estimated to be in the range of 3-5 days and with a global warming potential of 1, it is considered that NOVEC 1230 fluid has no measureable impact on climate change. These attributes ensure that NOVEC 1230 fluid represents a truly sustainable technology.

// Safety

NOVEC 1230 decomposes at temperatures in excess of 500°C and it is therefore important to avoid applications involving hazards where continuously hot surfaces are involved. Upon exposure to the flame, NOVEC 1230 will decompose to form halogen acids. Their presence will be readily detected by a sharp, pungent odour before maximum exposure levels are reached. It has been concluded from fire toxicity studies that decomposition products from the fire itself especially carbon monoxide, smoke, oxygen depletion and heat may create a greater hazard.

// Design

The systems are individually designed and appropriate sized storage cylinders chosen according to the hydraulics and quantity of agent required. The components are designed and tested to operate in the temperature range 0°C to 50°C. It is always preferred to store the cylinders out with the enclosure being protected but in some circumstances the certifying authority may agree otherwise with additional precautions.

Each container assembly comprises of a container, valve, siphon tube, safety fittings and container nameplate. NOVEC container assemblies are available in a range of sizes from 8ltr through to 180ltr. Containers are painted signal red to identify them as fire protection equipment.

The valve is designed for high discharge rates to allow the full container contents to be released within ten seconds.

It operates on the pressure differential principle and is constructed with a brass body and stainless steel piston. It is designed to be operated by means of a solenoid actuator, manual actuator or pneumatic actuator. The operation of any of the actuators depresses a Schrader valve which relieves pressure above the pressure differential piston which then opens fully by means of the pressure within the container. The valve is fitted as standard with a pressure gauge and a safety burst disc.

The container design details are stamped on the foot ring of each container to comply with the Pressure Systems Regulations.

// Room Integrity Testing

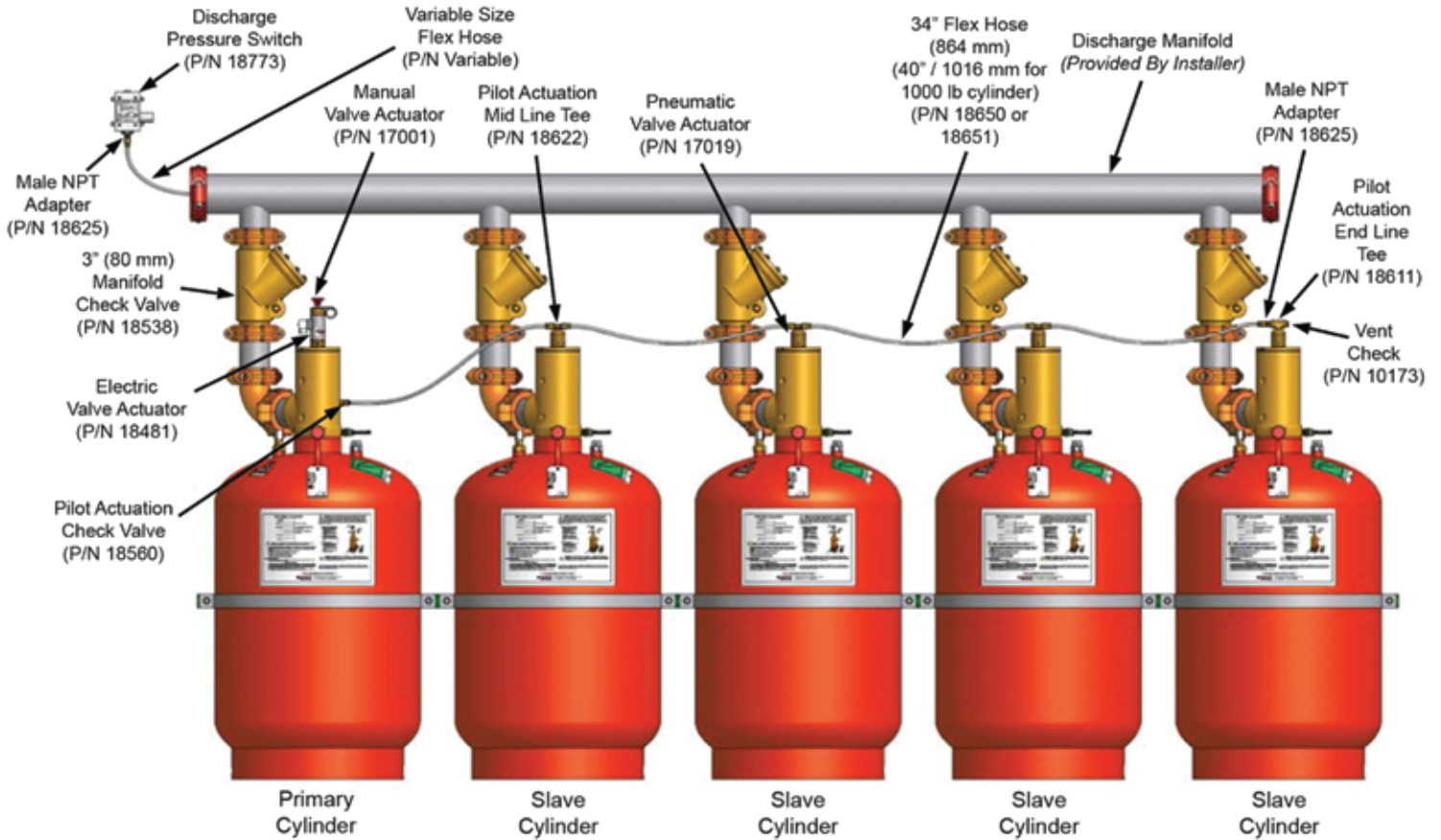
The successful performance of a gaseous total flooding system is largely dependent on the integrity of the protected enclosure. It is essential that a room integrity test is performed on any protected enclosure to establish the total equivalent leakage area and enable a prediction to be made of the enclosure's ability to retain NOVEC. The required retention time will depend on the particulars of the hazard, but MSC/Circ 848 states that this should not be less than 15 minutes. Longer retention times may sometimes be necessary if enclosures contain hazards that may readily become deep seated.

For further information on NOVEC 1230 or any other fire extinguishing system email tfis.marketing.uk@tycofire.com or visit the website www.tycofire.com.





INSTALLATION DIAGRAM



Hardware for fire rated door

Shopping Mall



Door Hardware Configuration



- Stainless steel Fire Rated Hinge**
- Tested by ANSI/BHMA A156.1, UL Listed
 - CE Certification, Pass BS EN1935 test
 - Pass EN1634 test
 - 200,000 life cycles



- Door closer**
- UL Listed, CE Certification
 - Pass BS EN1154 test
 - 500,000 life cycles



- Panic Exit Device**
- UL Listed, CE Certification
 - Pass BS EN1125 test
 - 200,000 life cycles





- Pre-engineered and pre-installed from factory
- Globally cost efficient and totally respectful of the products
- Available for hoods, ventilated ceilings and front cooking solutions
- Low pH Agent and proven design
- Aesthetically pleasing
- UL Listed (complying with UL 300)
- ULC Listed (complying with ULC/ORD-C1254.6)
- Complying with NFPA* 17A, NFPA* 96, LPCB LPS 1223 and CE Marked

In today's commercial kitchens, higher temperature cooking oils and high efficiency appliances (with a slow cooling down) such as deep-fat fryers have combined to make fire suppression more challenging than in past years. All the more challenging so the risk clearly identified concerning the deep fat fryers is associated to one less known: there are more kitchen fires starting from stoves or ranges, which are not equipped with heat safety switches contrarily to fryers. All the more challenging so the cooking fires natural behaviour is to spread the all building throughout the kitchen exhaust ductwork. The need to protect people and property from fire is crucial.

Halton's selected Ansul[®] R102™ fire suppression system. It is an automatic, pre-engineered system, designed specifically for professional kitchens to protect the ventilation systems associated with cooking equipment.

Its heart lies in its ability to quickly detect and suppress fires. Ansul[®] R102™ uses an advanced extinguishing agent to ensure rapid flame knock-down and vapour securement.

The integration by Halton of Ansul[®] R102™ system in Halton's products provides a cost efficient global solution, from the design of the ventilation systems to the fire suppression system. The factory pre-installation is a guarantee of efficiency and respect of both products.





R102- Fire Suppression System

Top choice for commercial cooking fire protection

- Cools grease and surrounding cooking surfaces
- Rapid flame knockdown
- Helps prevent reflash
- Color-coded, fusible-link detectors
- Aesthetic design complements kitchen decor
- Five-year limited warranty
- Non-corrosive agent
- UL/ULC listed and CE marked

Two design options available

- Customized appliance-specific design
- Overlapping "suppression zone" coverage

Today's high-temperature, high-efficiency cooking appliances, plus the use of hotter burning vegetable oils, poses a greater fire suppression challenge than in the past.

ANSUL • R102- Restaurant Fire Suppression Systems meet the challenge and are the top choice of food service kitchens worldwide.

Knock Down Kitchen Fires Fast

The R102- system incorporates a flexible design with an extremely effective ANSULEX Low pH Liquid Agent that quickly knocks down flames and cools hot surfaces while generating a tough vapor-sealing blanket that helps prevent reflash.

The R102- system is designed to protect cooking equipment such as various types of fryers, griddles, range tops, broilers, char-broilers and woks. It also detects and suppresses fire in ventilating equipment including hoods, ducts, plenums and auxiliary grease extraction devices.

Two Options for Flexible Protection

The appliance-specific design is one of the two protection options available with the R102- restaurant fire suppression system. The most efficient fire protection is accomplished when nozzles are selected and aimed at specific hazard areas on each appliance. This method typically provides the most economical use of liquid agent, reducing the size or quantity of storage tanks and associated hardware.

Overlapping appliance protection is flexible and simple. Nozzles are arranged in a straight line, providing overlapping agent discharge patterns where appliances can be protected, even if they are replaced or rearranged under the hood.





GLOBE

FIRE SPRINKLER CORPORATION

RESIDENTIAL **AUTOMATIC SPRINKLERS** **MODEL GL4110 & GL4910** **PENDENT** **RECESSED PENDENT**

DESCRIPTION AND OPERATION

The Globe Model GL4110 and GL4910 Residential Sprinklers have a low profile yet durable design which utilize a 3mm frangible glass ampule as the thermosensitive element. They feature economy, aesthetics and low flow.

The combination of the 3mm frangible glass ampule and specially designed deflector make the Model GL4110 and GL4910 Residential Sprinklers the ultimate in life safety and fire control. These Globe Pendant and Recessed Pendant Residential Sprinklers have met the strict requirements of Underwriters Laboratories Inc. as described in the UL Standard for Residential Sprinklers for Fire Protection Service, UL 1626, and should be used accordingly. These sprinklers should also be installed in accordance with the appropriate NFPA Standard 13, 13D or 13R and under the direction of the approving authorities having jurisdiction.

The heart of Globe's Model GL4110 and GL4910 sprinklers proven actuating assembly is a hermetically sealed frangible glass ampule that contains a precisely measured amount of fluid. When heat is absorbed, the liquid within the bulb expands increasing the internal pressure. At the prescribed temperature the internal pressure within the ampule exceeds the strength of the glass causing the glass to shatter. This results in water discharge which is distributed in an approved pattern.

The sprinkler and escutcheon are not factory assembled. Assembly is done in the field.

TECHNICAL DATA

- See reverse side for Approvals and Specifications.
- Temperature Rating - 155°F (68°C), 175°F (79°C)
- Water Working Pressure Rating - 175 psi (12 Bars)
- Factory tested hydrostatically to 500 psi (34 Bars)
- Maximum low temperature glass bulb rating is -67°F (-55°C)
- Frame - bronze • Deflector - brass • Screw - brass
- Bulb seat - copper • Spring - nickel alloy • Seal - teflon
- Bulb - glass with alcohol based solution, 3mm size
- Escutcheon Assembly - steel

SPRINKLER TEMPERATURE RATING/CLASSIFICATION and COLOR CODING

CLASSIFICATION	AVAILABLE SPRINKLER TEMPERATURES		BULB COLOR	N.F.P.A. MAXIMUM CEILING TEMPERATURE	
ORDINARY	155°F	68°C	RED	100°F	38°C
INTERMEDIATE	175°F	79°C	YELLOW	150°F	66°C



**RESIDENTIAL
PENDENT**



**RESIDENTIAL
RECESSED PENDENT**

4077 AIRPARK DRIVE, STANDISH, MICHIGAN 48658

989-846-4583 • FAX 989-846-9231



Fire Hose Cabinets



Fire Hose cabinets - VH 600S

Manufactured in accordance with highest technical and international standards. Such products can be used different industrial & power plants, residential, commercial buildings, hospitals and schools that require protection from class A & B fires.

Fire Hose cabinets - VH 600

Manufactured in accordance with highest technical standards and international qualification. Such products can be used different industrial & power plants, residential, commercial hospital building and other installation that require protection from class A & B fires.



Foam Cabinets - VH 9000

Volcano foam - water cabinets Model VH-9000 are characterized by its performance for attacking class A&B fires, Effectively used gas stations, petrochemical plants, industrial premises, warehouses, car parking, paint factories and any situations requiring foam protection.







rigid coupling



flexible coupling



90 elbow



45 elbow



22.5 elbow



cross



reducing tee grooved



equal tee



reducing tee threaded



concentric reducer



concentric reducer threaded



eccentric reducer



flange adaptor



flange grooved



cap grooved



mechanical tee grooved



mechanical tee threaded



mechanical cross grooved



mechanical cross threaded



u bolted mechanical tee



Socket Weld Cross



Threaded Cross



Socket Weld Union



Threaded Union



45° Socket-Welding Elbow



45° Threaded Elbow



90° Socket-Welding Elbow



90° Threaded Elbow





PUMP ROOM INSTALLATION DIAGRAM





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