FirePro.

Reinventing Fire Suppression

Welcome to the world of

FirePro.

The global leading manufacturer of Condensed Aerosol Fire Extinguishing Technology

Presenter's Profile

Dr Ghigo Gianfilippi de Parenti

- Member of ISO TC21 Committee on Equipment for Fire Protections and Fire Fighting
- Member of the CEN/TC191 Committee on Fixed Firefighting Systems
- Member of UL STP 300 Committee on Extinguishing Systems
- Member of the NFPA 2010 Committee on Aerosol Extinguishing Systems
- Member of the IMO Sub-committee on Fire-Protection FP/WP2 (Performance Testing and Approval Standards for Fire Safety Systems)
- Head of R & D and Manufacturing

FirePro Systems Technical Director







FirePro.

Company Profile

FirePro came to prominence in the fire fighting industry, following the 1994 Montreal Protocol on ozone depleting substances that banned the use of Halon 1301 fire extinguishing agent - the universally accepted and most widely used at the time.



- FirePro Systems Ltd established in 1996
- HQ & Manufacturing Facilities in Cyprus
- Distributors in 80 countries
- Installations in 110 countries



Distribution Network

Italy

Latvia

Malta

Norway

Poland

Portugal

Romania

Slovakia

Sweden

Turkey

Switzerland

United Kingdom

Serbia

Spain

Lithuania

Luxembourg

Netherlands

EUROPE

Albania Austria Belgium Bulgaria

Croatia
Cyprus

Czech Rep.

Denmark Estonia

Finland

France

Georgia

Germany

Greece

Hungary

Iceland

Ireland

AMERICA S

Argentina

Brazil

Canada

Chile

Colombia

Mexico

Peru

Uruguay

U.S.A.

GULF & MIDDLE EAST

Bahrain

Iraq

Jordan

Kuwait

Saudi Arabia

Lebanon

Oman

Qatar

UAE

ASIA & AUSTRALASI A

Australia Bangladesh

Hong Kong

India

Indonesia

Malaysia

New Zealand

Philippines

Singapore

South Korea

Sri Lanka

Taiwan

Thailand

Vietnam

AFRICA

Botswana

Congo

Egypt

Ghana

Ivory Coast

Kenya

Liberia

Mauritius

Morocco

Nigeria

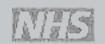
South Africa

Sudan

Tanzania

Tunisia

Indicative Client Portfolio





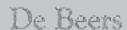






Bloomberg



































orange"



What is Aerosol?

Definition:

- Aerosol: A colloidal suspension of particles dispersed in air or gas(es)
- Colloids: Particles with diameter of a few microns nanometers



Aerosol in Fire Extinguishing

15th Century Potassium salts used to extinguish fires in Germany

1950's Russian technology (Solid aerosol to gaseous form)

(Aerospace program)

1996 FirePro fire suppression condensed aerosol systems



Solid Aerosol Forming Compound (FPC)

- Compact strong solid
- Non-pyrotechnic
- Certified Lifetime 15 years
- Transformed into Aerosol upon activation (electrical or thermal)
- Exothermic transformation process
- Self-activation Temperature + 300

°C





Health Safety and Environment

Ozone Depletion Potential (ODP):
 Zero (EPA-SNAP)

Listed)

Global Warming Potential (GWP): Zero

Atmospheric Lifetime (ATL): Negligible

Oxygen Depletion: None



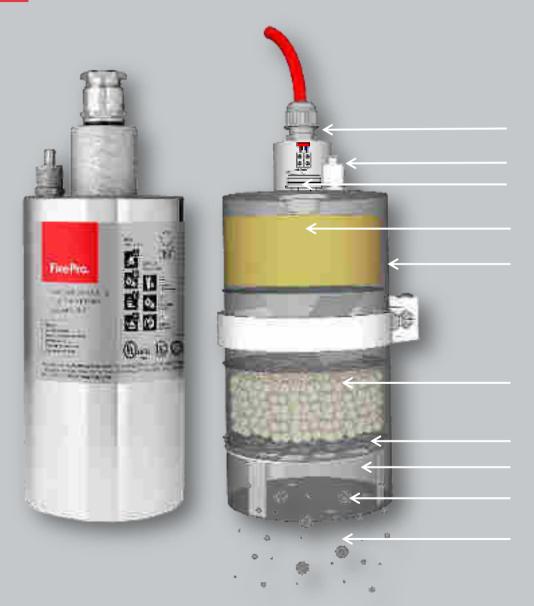








Condensed Aerosol Generator



Electrical Activation

Thermal Activation Electrical Actuator

Solid Aerosol Forming Compound

Stainless Steel Metal Housing

Heat Absorbing Medium

Sealant

Egress Chamber

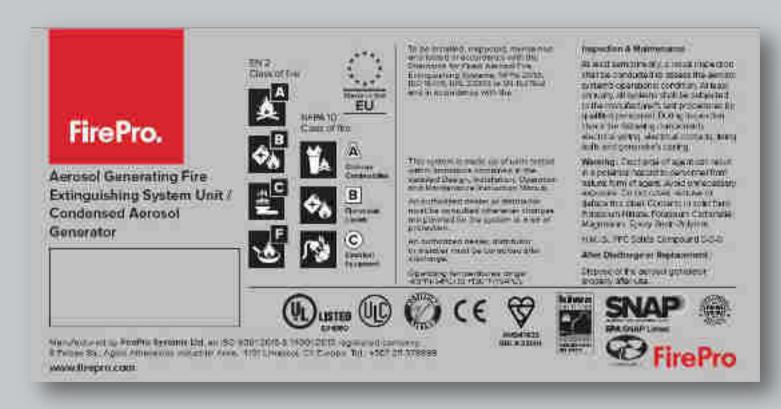
End Plate Discharge Outlet

Condensed Aerosol

Range of Products



Product Labels

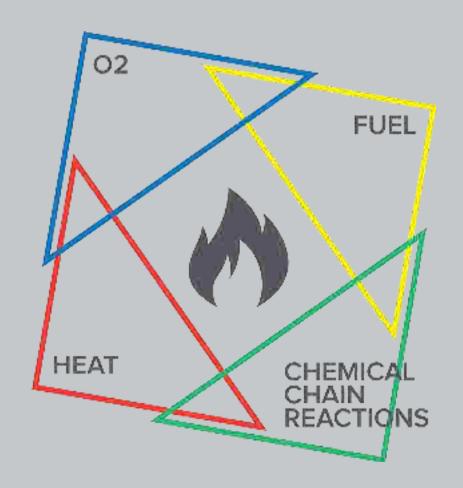




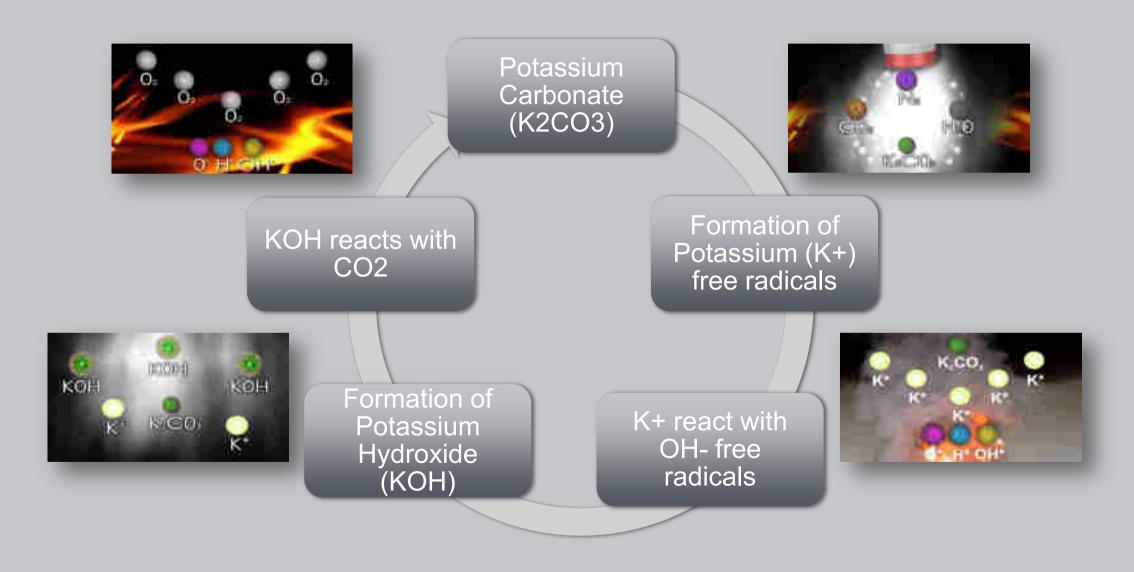
Aerosol Fire Extinguishing Action



Tetrahedron of Fire



Fire Extinguishing Action



Certificates, Type Approvals and Test Reports



Condensed Aerosol Technology Standards:



Organization
International Organization
for Standardization
Standard
ISO 15779:2011



Organization
International Maritime
Organization
Standard
IMO: MSC.1/Circ.1270



Organization
European Committee
for Standardization
Standard
EN 15276



Organization
National Fire Protection
Association
Standard
NFPA 2010



Organization
UL - Underwriters
Laboratories INC.
Standard
UL 2775



Organization KIWA NV Standard BRL-K23001



Organization
Standards Australia
Standard
AS 4487-2013



Organization
GOST - Russian
Quality Standards
Standard
GOST R 51046-97
Fire Engineering
Generators of
extinguishing aerosol



Organization
KFI - Korea
Fire Institute
Standard
Guideline for the Automatic
Condensed Aerosol
Fire Extinguisher



Condensed Aerosol Technology Standards:









SANS 15779 ED. 1 (2012)



FirePro technology Listings & Approvals FOR LAND APPLICATIONS (1/2):



Organization

UL - Underwriters Laboratories

Certification Protocol

UL 2775 – Fixed Condensed Aerosol Extinguishing Units

Reference

FWSA.EX6960



Organization

BSI - British Standards Institution

Certification Protocol

BRL-K23001/05 Aerosol Generating Fire Extinguishing System Units

Reference

Kitemark License Number KM 547633



Organization

ULC - Underwriters Laboratories of Canada

Certification Protocol

ULC/ORD-C2775-12
Fixed Condensed Aerosol
Extinguishing Units

Reference

FWSAC.EX6960



Organization

KIWA NV

Certification Protocol

BRL-K23001/05 Aerosol Generating Fire Extinguishing System Units

Reference

Product Certificate K21774



FirePro technology Listings & Approvals

FOR LAND APPLICATIONS (2/2):



Organization

CSIRO - Commonwealth Scientific & Industrial Research

Certification Protocol

AS 4487-2013 & UL 2775 Fixed Condensed Aerosol **Extinguishing Units**

Reference

ActivFire Certificate of Conformity afp-2286



Organization

CNBOP PIB - Scientific & Research Center for Fire Protection

Certification Protocol

EN 15276-1:2019 Condensed Aerosol Fire **Extinguishing Systems**

Reference

Certificate of Conformity NR. 4/2015



Organization

KFI - Korea Fire Institute **Certification Protocol** Guideline for the Automatic Condensed Aerosol Fire Extinguisher

Reference

Sogong 15-23-1



Organization

GOST (FOCT) - Russian Quality Standards

Protocol

GOST R 51046-97 Fire Engineering - Generators of extinguishing aerosol

Reference

GOST TP 1389534



Organization

Global Mark

Certification Protocol

AS 4487-2013 Condensed aerosol fire extinguishing systems

Reference

42783209BA28F38FCA257 F5B00152E55



Organization

LPCB – Loss Prevention Certification Board Reference

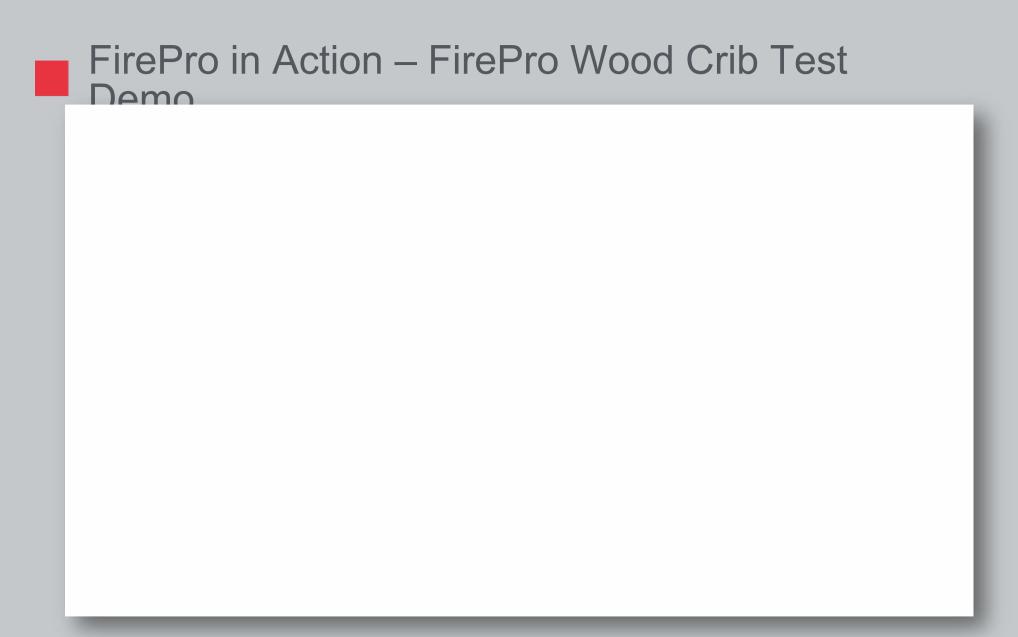
1417a Issue:01



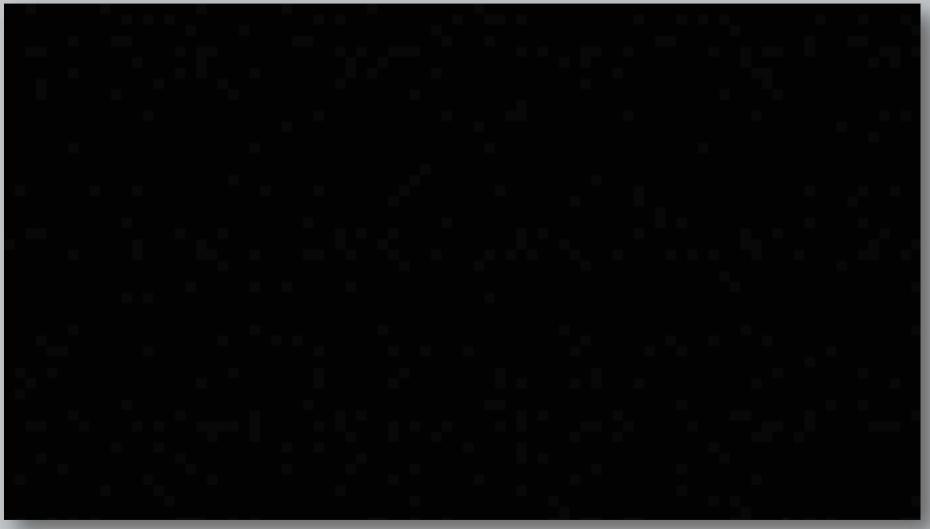
UL-2775 Fire Extinguishment tests

- Wood Crib –Class A tests
- Polymeric Material: PP, ABS, PMMA
- N-Heptane Class B
- Minimum height / maximum height area coverage tests





FirePro in Action – Polymeric Materials Test ISO 15779



UL-2775 Performance Tests

- General
- Discharge Test
- Temperature Measurement Test
- Mounting Device Test
- Rough Usage Test
- Vibration Test
- Pyrotechnic Reaction Containment Test
- Fire Exposure Test
- High Humidity Test
- Moist Hydrogen Sulfide Air Mixture Corrosion Test
- Moist Carbon Dioxide-Sulfur Dioxide Air Mixture Corrosion Test
- Salt Spray Corrosion Test
- Thirty-Day Elevated Temperature Test
- Temperature Cycling Test
- Aging Test



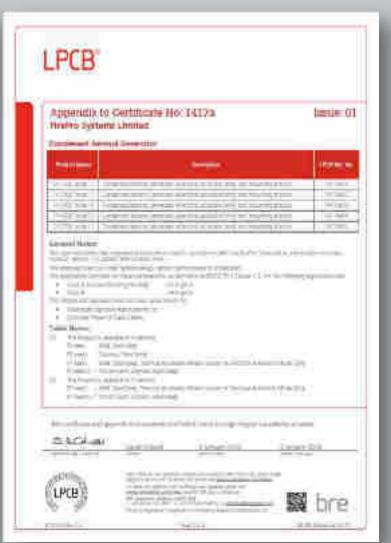
UL CERTIFICATE OF COMPLIANCE





LPCB Red Book Listing







KIWA Certified - Land Applications

Product Conformity Certificate - BRL-K23001







KIWA Certified - Land Applications

Declaration of Conformity for EN 15276







KIWA Certified - Land Applications

Declaration of Conformity for ISO 15779







FirePro (Powdered Aerosol E) is included in the U.S. EPA SNAP list as suitable for "Normally Occupied Areas".



Aerosol E in normally occupied spaces, EPA now determines that Powdered Aerosol E is also acceptable for use in total flooding systems for normally occupied spaces, and EPA is adding Powdered Aerosol E to the list of acceptable substitutes for total flooding uses, which would include both unoccupied and occupied spaces. In a

Abstract: Federal Register Vol. 83, No. 193 Thursday, October 4, 2018 Rules and Regulations

As per EPA the use of FirePro is less harmful to the atmosphere than the use of ODS & substitutes commonly used in this sector, as it is less harmful to the ozone layer, has a lower climate impact as well as a shorter ALT.



Green Label Certificate



Organization: **GEN** (**Global Eco-labelling Network**)

(GEN) is a non-profit making association.

Their standards address multiple environmental criteria across the **life cycle** of a product or service and, most importantly, they are transparent in their development process and employ **independent**, **third-party verification**.



ISO 9001:2015 and ISO 14001:2015 Certified









European Electromagnetic Compatibility (EMC) Directive





Safety Integrity Level (SIL)

FirePro generators are found to be in compliance with the requirements of:

- SIL 2 with Hardware Fault Tolerance = 0
- SIL 3 with Hardware Fault Tolerance = 1

SIL is an indicator of probability that a system will fail to perform properly, thus a third-party certification is requested for Risk Management / Insurance purposes.





FirePro technology Listings & Approvals

FOR MARINE APPLICATIONS:

MED Approval (Wheelmark)



Organization:

British Standards Institution

Type:

Certification Body

Country:

International

Description:

Wheel Mark in Compliance with MED 2014/90/EU

Reference:

BSI/A.1/3.46/560436 Module B & BSI/MED/PC/560437 Module D







FirePro technology Listings & Approvals for MARINE APPLICATIONS:

Type Approvals by IACS Members



Organization
ABS - American Bureau
Of Shipping
Certification Protocol
IMO MSC.1/Circ.1270 UL 2775



Organization
BV - Bureau Veritas
Certification Protocol
IMO MSC.1/Circ.1270



Organization
RINA
Registro Italiano Navale
Certification Protocol
IMO MSC.1/Circ.1270



Organization
RS - Russian Maritime
Register of Shipping
Certification Protocol
IMO MSC.1/Circ.1270



Organization
CRS – Croatian Register of Shipping
Certification Protocol
IMO MSC.1/Circ.1270





FirePro technology Listings & Approvals FOR MARINE APPLICATIONS:

Local Marine Approvals



Organization
Danish Maritime
Authority
Reference
Type Approval Certificate 199
925855



Organization
European Certification
Bureau B.V.
Reference
Certificate of Compliance
No. 15031995



Organization
United Kingdom Maritime & Coastguard Agency
Reference
Certificate of Inspection & Test MS 22/3/910



Organization
Australian
Marine Safety
Reference
TE: AFP 07 09 23 ltr



Organization Hellenic Register of Shipping Reference 4232/9



Organization
Netherlands Shipping
Inspectorate
Reference
IVW-06KU00014



Organization Icelandic Maritime Administration Reference 506.001.02



Organization
Swedish Maritime
Administration
Reference
070202-04-15563





Organization
New Zealand
Register of Ships
Reference
CSM 07020-03



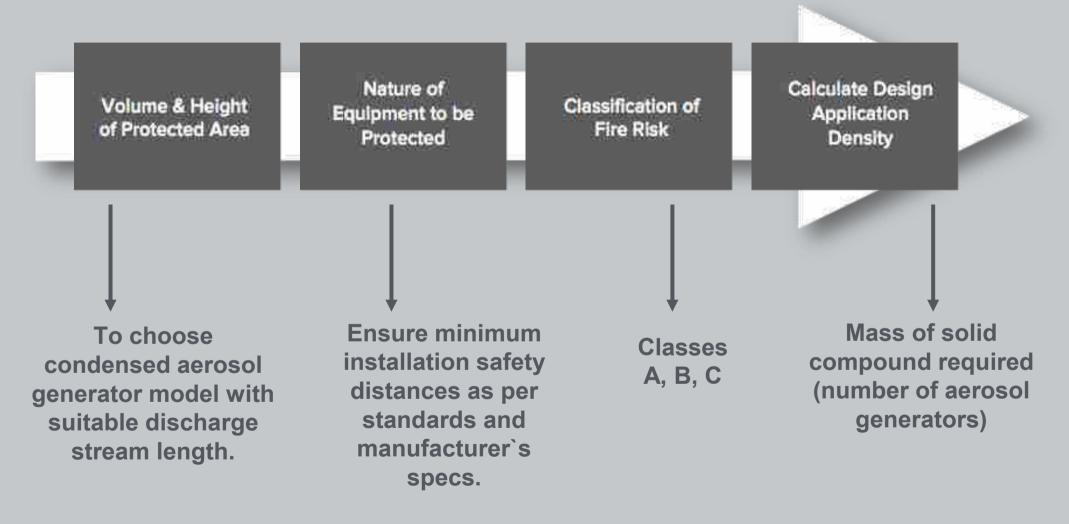
Total Flooding Design

&

System Operation



Design Approach



Design Principle (UL Standards)

Land Applications

 $M = V \times D \times S.F$

M (g) = Mass of Aerosol forming compound

V (m³) = Protected Volume

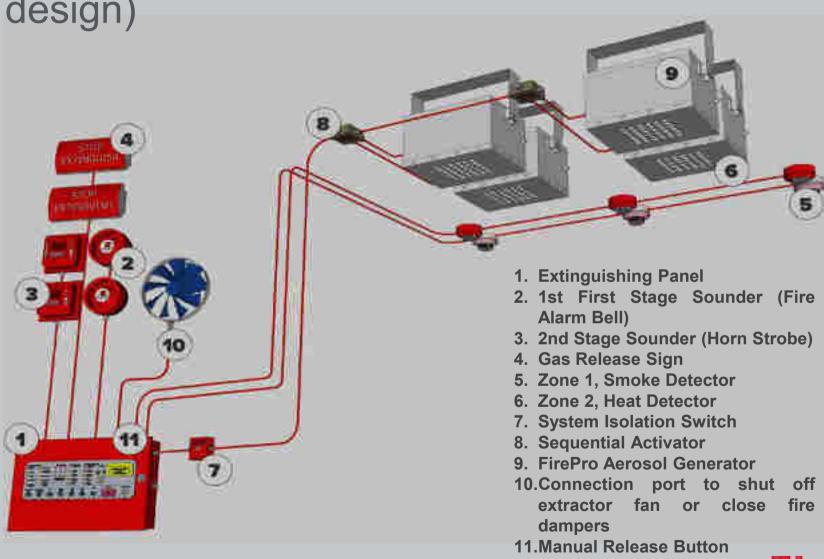
 $D (g/m^3) = Extinguishing Application Density (EAD)$

SF = Safety Factor (30%)

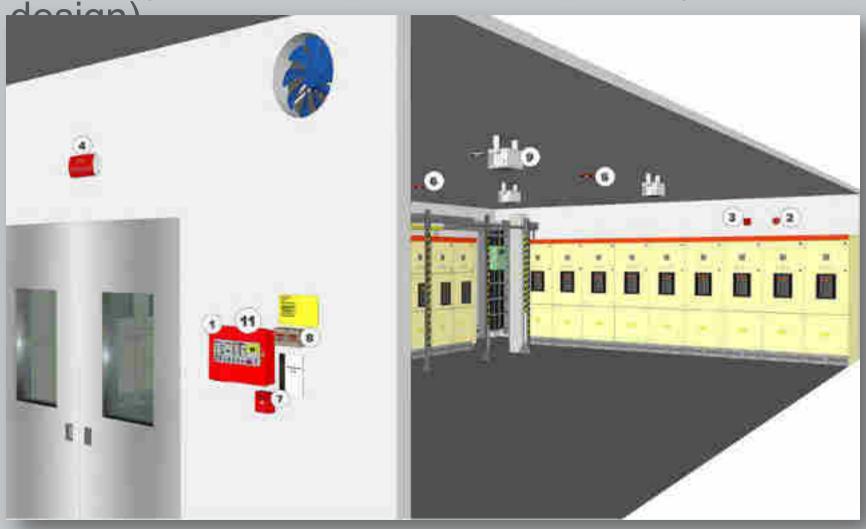
Fire Class	E.A.D UL (g/m³)
А	84
В	84
С	84



Basic System Components Required (UL design)



Basic System Components Required (UL



1. Extinguishing Panel

- 5. Smoke Detector (Zone 1) 9. Aerosol Generator
- 2. 1st Stage Sounder (Bell)
- 5. Smoke Detector (Zone 1) 5. Aerosor Constant

 6. Heat Detector (Zone 2) 10. Shut off Device of fire dampers & fans

 11. Manual Polease Button 3. 2nd Stage Sounder (Horn Strobe) System Isolation Switch 11. Manual Release Button
- 4. Gas Release Sign

8. Sequential Activator

Design Principle (EN 15276 or ISO 15276)

Land Applications

 $M = V \times D \times S.F$

M (g) = Effective mass of discharged extinguishant

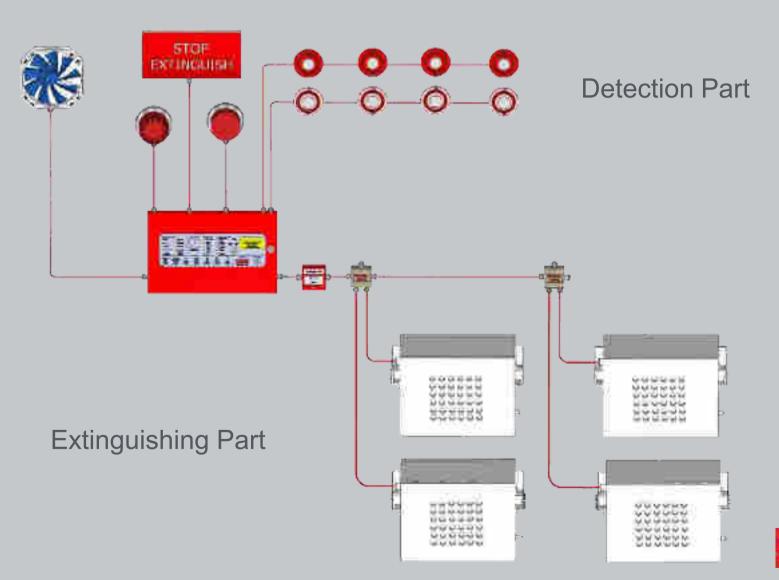
V (m³) = Protected Volume

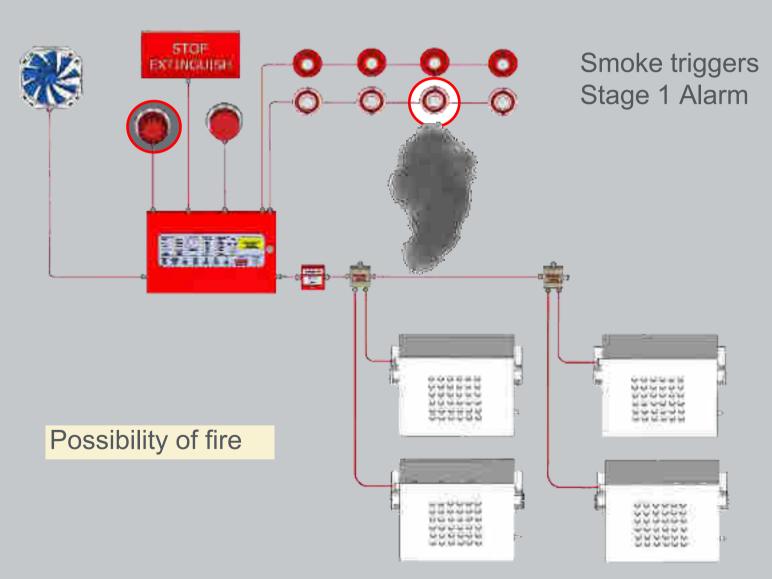
 $D (g/m^3) = Extinguishing Application Density (EAD)$

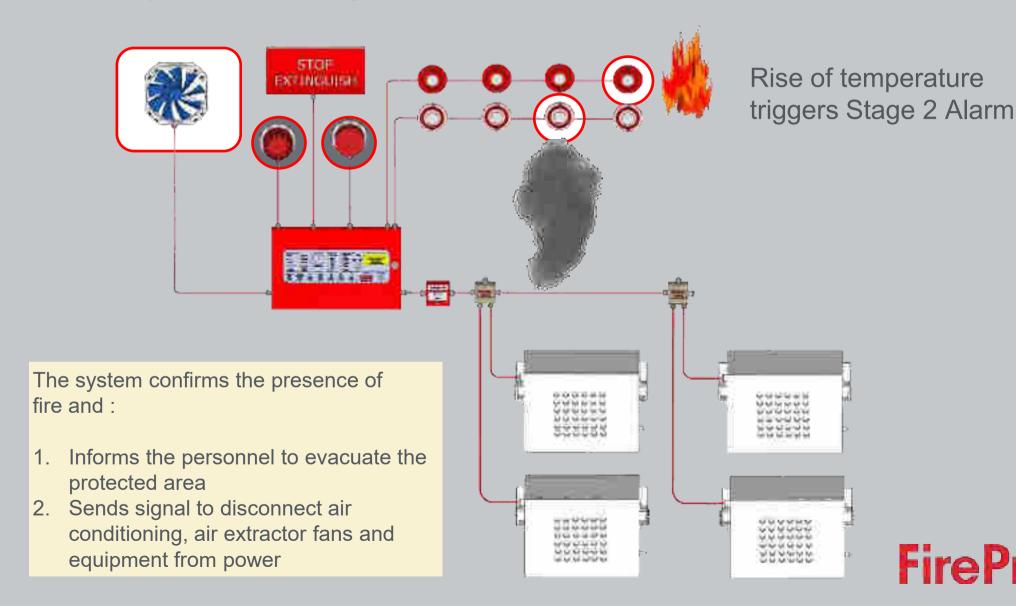
SF = Safety Factor (30%)

Fire Class	E.A.D. EN (g/m³)
A (polymeric)	62
A (wood)	74
В	52

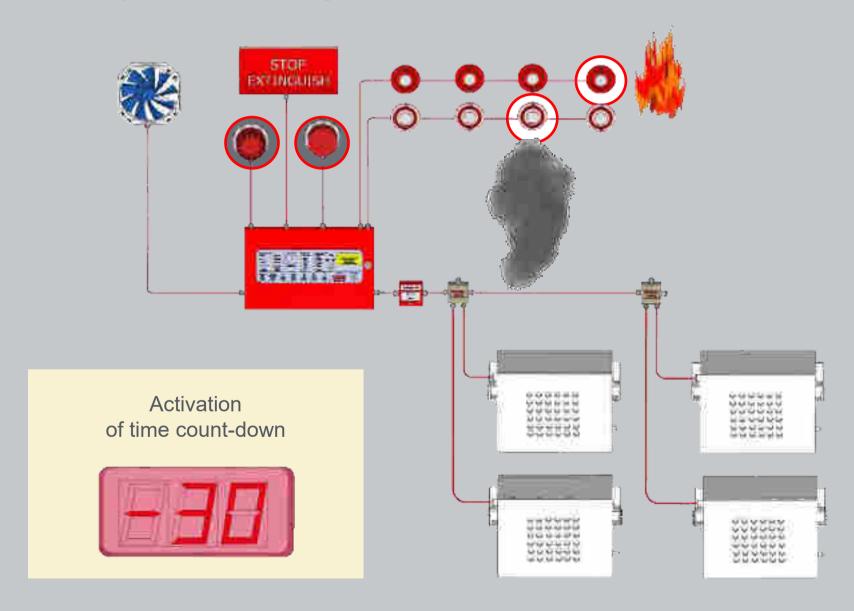


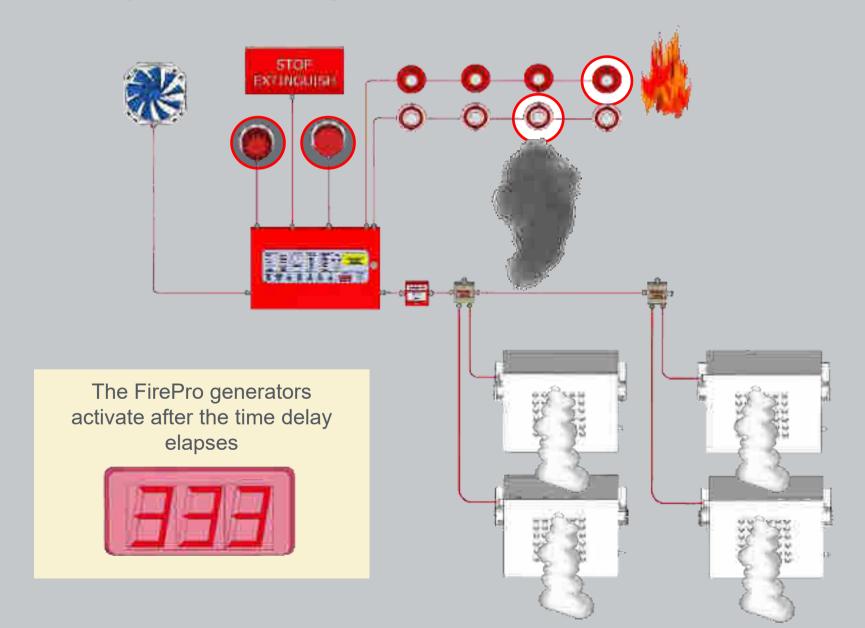












FirePro System - Operation



FirePro – Effective & **Efficient**

Agent Mass Comparison:

- 4x more efficient than Halon 1301
- 6x more efficient than FM-200
- 7.5x more efficient than FE-13

- 15.5x more efficient than CO₂
- 40x more efficient than inert gases





FirePro in Action – Total Flooding / Non Pressurized System





FirePro: NO Storage – NO Pipes – NO Pressurized



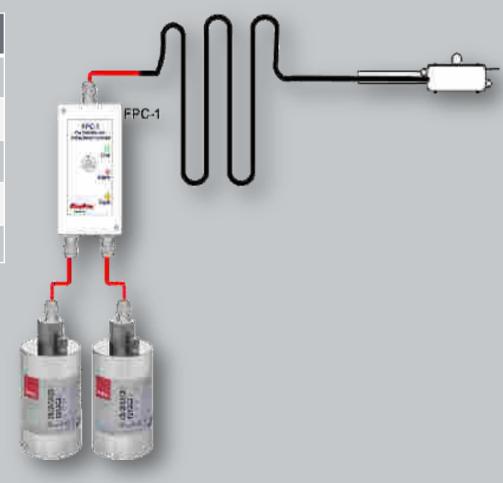


Modular Controllers: FPC-1

Model	FPC-1
Battery	4x 1.5V (internal)
Detection	LHD or Built in Heat Sensor
Monitoring	YES
Output Signals	NO
No. of Generators	2 maximum

Where it can be used?

- Spaces with no power supply
- Generator rooms
- Container enclosures
- Protection of shipped goods

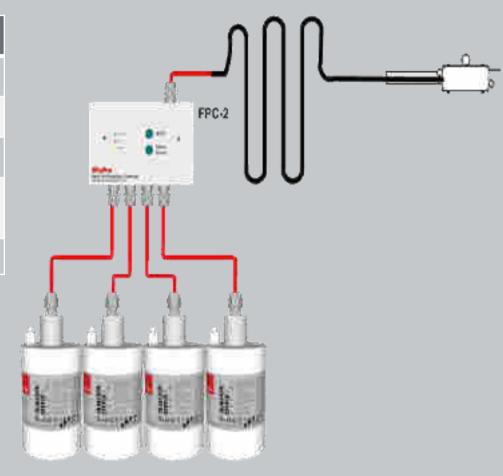


Modular Controllers: FPC-2

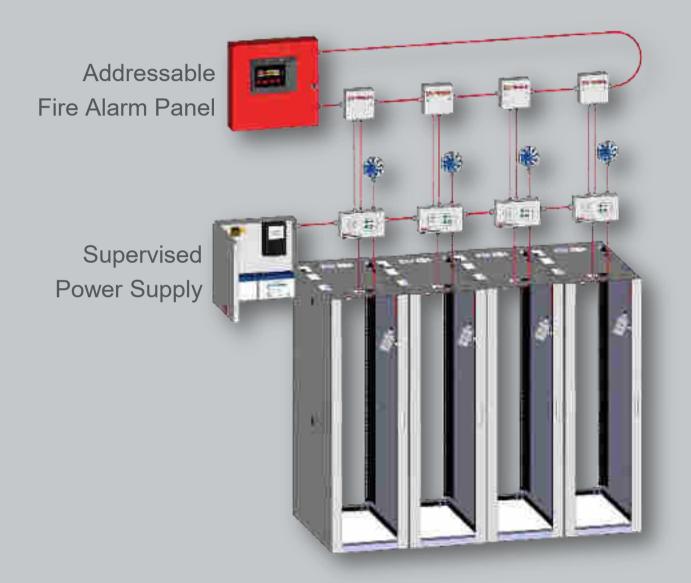
Model	FPC-2
Power Supply	24V (external)
Detection	LHD or Automatic Sensors
Monitoring	YES
Output Signals	YES (2) Alarm or Fan cut off & Fault
No. of Generators	4 maximum

Where it can be used?

- Multiple electrical panels
- Specialized equipment (Kardex)



FPC-2 for Multiple Enclosures





FirePro.

Modular Controllers: FPC-4R V3

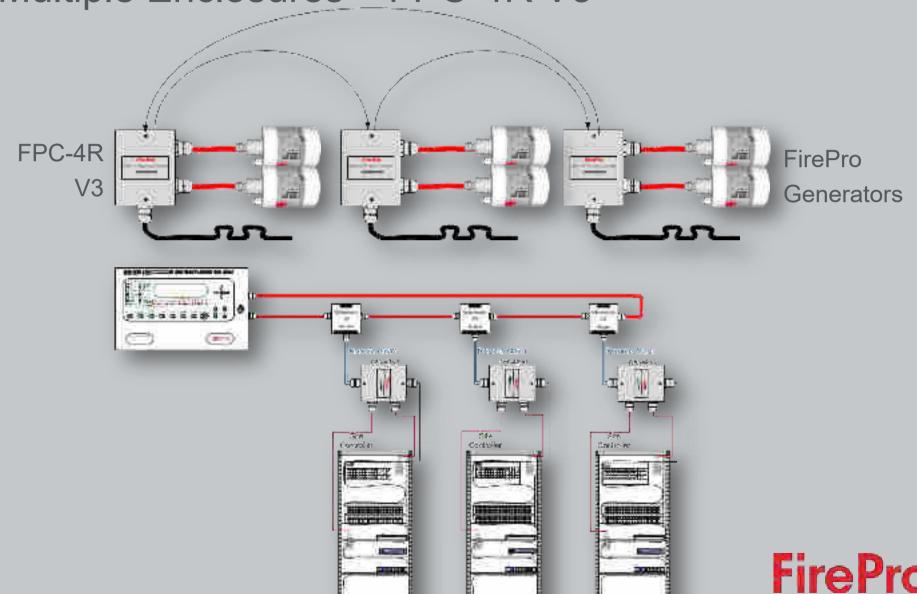
Model	FPC-4R V3
Battery	3V (internal) or 24V (external)
Detection	LHD (2 input terminals)
Monitoring	NO
Output Signals	YES (2)
No. of Generators	2 maximum

Where it can be used?

- Electrical panels
- Engine bays



Multiple Enclosures – FPC-4R V3



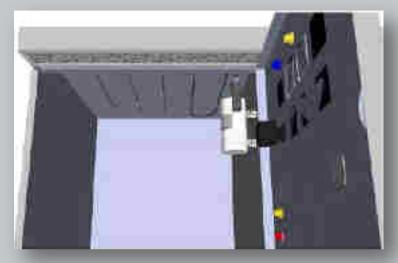


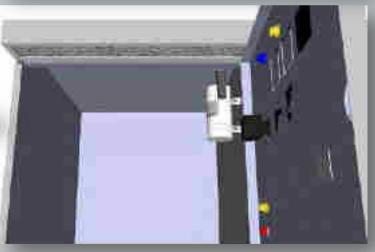
Modular Controllers: FPC-5V2

Model	FPC-5V2
Battery	3V (internal)
Detection	LHD (68, 88, 105°C) or Bi-metallic (60, 70, 80, 100°C)
Installed	On generator
Monitoring	YES (battery status)
Output Signals	NO
No. of Generators	1 for each
Re-usability	Change upon discharge

Where it can be used?

Any enclosure to be protected only by 1 generator





Stand Alone Systems: **BTA** (Bulb Thermal Actuator)

Model	ВТА
Rated Temp. Options	57, 68, 79, 93, 141, 182 C
Detection	Thermal
Installed	On generator
No. of Generators	1 for each
Re-usability	Change upon discharge



Where it can be used?

Any enclosure to be protected only by 1 generator



FirePro in Action — Small Enclosure Demo



FirePro in Action — Small Enclosure Demo (With Obstacles)





Large Enclosures (Kentec Panel)

Model	Sigma XT / Sigma A-XT
Battery	24V (internal)
Detection	Automatic Detectors
Installed	External
Monitoring	YES
Output Signals	Various
No. of Generators	40 maximum (up to 360 master/slave)
Re-usability	YES
Listings	UL / EN



Where it can be used?

In large room enclosure(s)



ATEX Certified Aerosol Generators for Explosive Atmospheres





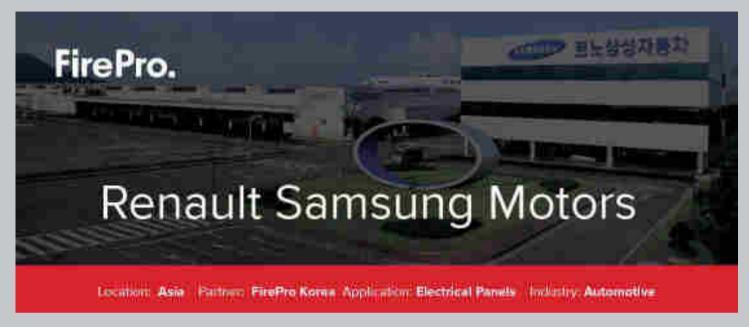
Applications & References

Applications

- Archives
- Cable Tunnels
- False Ceilings
- Raised Floors
- Wind Turbines
- Inverters
- Power Packs
- Electrical Panels
- Main DistributionBoards
- Switchgear
- Power FactorCorrection
- Control Rooms
- Electrical Rooms
- Transformer Rooms
- Telecom Shelters
- Diesel GeneratorRooms

- Marine Engine Rooms
- Vehicle Engine Bays
- Heavy Vehicle Engines
- Railway Stations
- Rolling Stock
- Medical Equipment
- Processing Areas
- Pumps Rooms
- Boilers Rooms
- Chillers Rooms
- Burners Rooms
- Compressors Rooms
- Machine Tools
- Kitchen Hoods
- Bank Vaults
- Dangerous Goods
- First Responders
- Storage Areas
- Laboratory Rooms





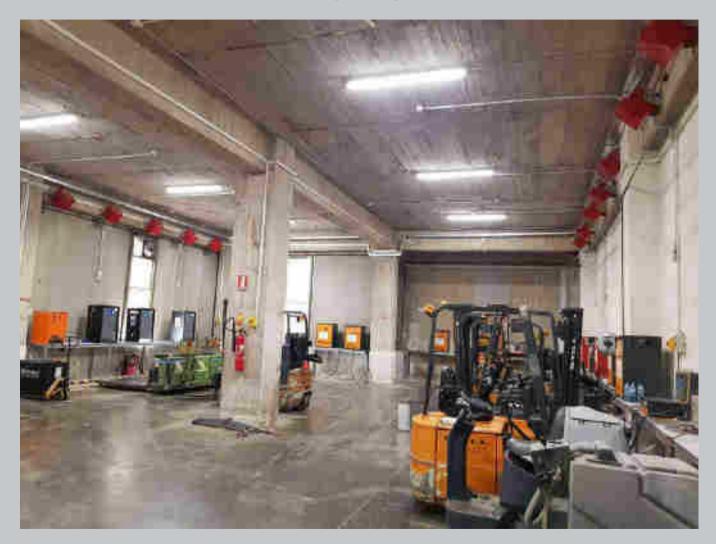




Renault Samsung Motors



Karelia Tobacco Company Inc. (Greece)



North Canada - Cape Dorset. Main Generator Room









FirePro.

Pfizer



Pfizer Inc. is an American multinational pharmaceutical corporation. Pfizer is named after German-American Charles Pfizer who cofounded the company with his cousin Charles Erhart in 1949 as a manufacturer of fine chemicals. Today it is among the world's largest pharmaceutical companies as it develops and produces medicines and vaccines for a wide range of medical disciplines.







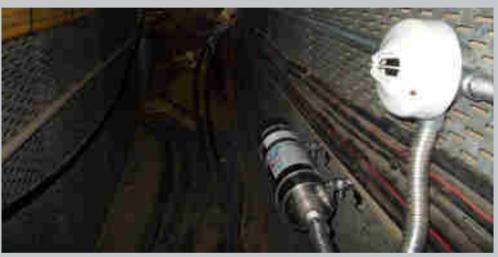
AIRPORTS COMPANY SOUTH AFRICA

Arrica Limited (ACSA) operates many of South Africa's busiest surports. The company currently manages a renyols of nine sirports including the three main international gateways of O.R. Tambo international and King Shake international Airports. In 2013, these proports fecilitated nearly 40 million passengers.



Airports Company South Africa









Kokam Co, is a global leader in the design and manufacturing of rechargeable battery solutions, it currently holds over 150 patent listings and it was the first company to develop high capacity lithium-ion polymer batteries worldwide. With the rise of grid-connected renewable energy sources, Kokam's Energy Storage Systems have been recognized as the most effective solution.

Kokam Co. Kokam Ko







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Agrawin BV was established in 1989 from the merger of Agrarian Union Vulcan and Winterswijk. Since then it specializes in the marketing, consulting and sales of pesticides, seeds, fertilizers and other supplies for agriculture and horticulture purposes. The company has a number of distribution warehouses containing hazardous goods that pose obvious fire threats.





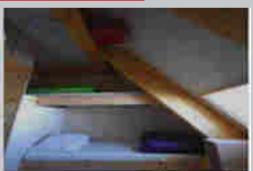
FirePro.



Antarctica is where for decades cutting edge science has been applied to assist in experimentation and observation. It is a shining example of international preservation governance through collaboration. In this pristine environment, the International Polar Foundation welcomed in 2009 the world's first "zero emission" scientific research station, the Princess Elisabeth Antarctica.









Brenntag AG is a European multinational chemical distribution company which operates in more than 70 countries worldwide. Brenntag is currently the global market leader in full-line chemical distribution. All Brenntag facilities adhere to ISO standards and HACCP food safety regulations. Brenntag is listed at the German Stock Exchange in the Prime Standard Segment since 2010.







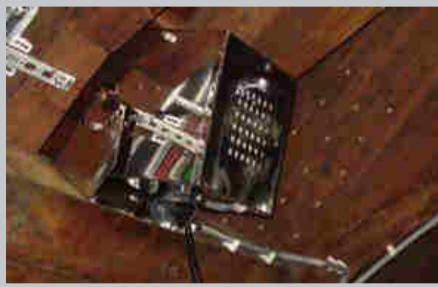


The Netherlands is strewn with historical and other architecturally significant buildings especially in the Amsterdam Canal District (Grachtengordel). Some of these buildings are used commercially as hotels and restaurants while others are reserved as museums. The canal houses date back to the Dutch Golden Age in the 17th century. This is why Grachtengordel is listed as a World Heritage site by UNESCO.











500MW Power Station - Siemens Cooperation between PGCIL & Bangladesh. Location:

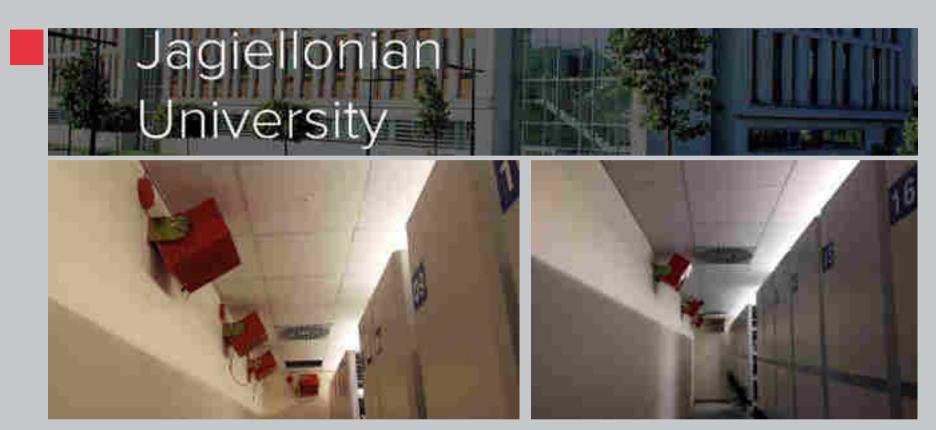


FirePro.



The Jagiellonian University was founded in 1364 by Casimir III the Great in Kraków. It is the oldest university in Poland, the second oldest in Central Europe and one of the oldest universities in the world. It was ranked by QS World University Rankings as the best Polish university among the world's top 500 and by the ARWU as the best Polish higher-level institution. In 2006, The Times ranked Jagiellonian as Poland's top university.









Tetra Pak is a multinational food packaging and processing company with headquarters in Europe. It derives its name from the tetrahedron-shaped plastic-coated paper carton innovation, that took the world by storm since its introduction to the market. Tetra Pak offers packaging, filling machines and processing for the food and beverage industry and it is currently the world's leading food processing and packaging solutions company.



Tetra Pak













Van Peperzeel













Chelsea & Westminster Hospital is located in the heart of London, It is operated by the NHS Foundation Trust and has close links with the Imperial College of London University. Chelsea and Westminster Hospital provides a range of normal and specialist medical services for patients including accident and emergency, paediatric and neonatal intensive care, high risk maternity, burns unit, HIV, dermatology, stroke services and weight loss surgery.



Chelsea & Westminster Hospital











The Client

The Canadian Coast Guard (CCG) is tasked with marine Search and Rescue (SAR), Communication, Navigation and Transportation issues in Canadian waters. It currently operates 119 vessels and 22 helicopters, in conjunction with a variety of smaller craft, CCG's responsibility covers a 202,080-kilometer long coastline, the longest of any other nation in the world. Under its renewal mandate the CCG is required to build and protect its next generation of vessels and lifeboats stationed across Canada to provide key Search & Rescue (SAR) capabilities.



The Canadian Coast Guard (CCG)







Glencore plc (an acronym for Global Energy Commodity Resources) is a multinational commodity trading and mining company headquartered in Europe. It is the world's third largest family business and as of 2014, it ranked tenth in the Fortune Global 500 list of the world's largest companies. Glencore is in effect the world's leading producer and marketer of commodities.



Mount Isa Mines











Eurostar is the high-speed rail service directly linking
Britain to mainland Europe via the Channel Tunnel. It
started operating in 1994, providing city center to city
center services. The service is operated by 27 eighteencoach Class 373/1 trains which run at up to 300
kilometers per hour on a network of high-speed lines.
Eurostar is the dominant operator on the routes that it
operates, carrying more passengers than all airlines
combined.

Battery Rooms: ICAP UK









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Eurostar International









Egyptian LNG (ELNG) - Liquefied Natural Gas Facilities

Location: Africa

Dealer: Watania AdvancedSystems

 Application: UPS Rooms, Control Rooms, Electrical Panels







Perenco – European Oil & Gas Company

Location: Africa

Dealer: Protecta Tunisie

Application: Electrical Rooms

Industry: Oil & Gas







FirePro.



Project - Electrical Sub Stations for wharf container stackers

16 sub stations

- Client D.P. World a leader in international marine terminal operations and development, logistics and related services.
- Installation One of our accredited distributors in Brisbane for marine & land based project construction & mining.







Project - Electrical Sub Stations for wharf container stackers 16 sub stations



Offshore Oil Platforms









Dubai International Airport: Kardex Storage Systems



Kardex Storage Systems: Dubai International Airport



Substations: Electricity Authority of Cyprus







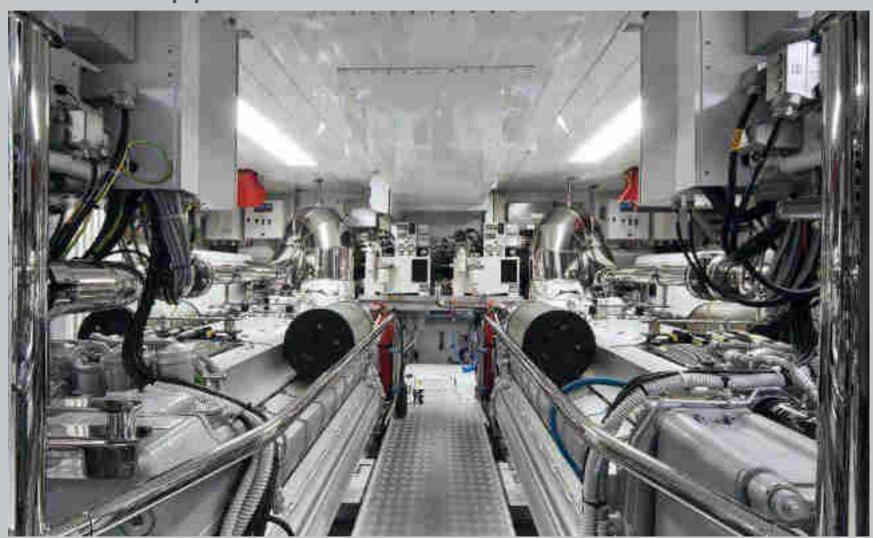


FirePro.

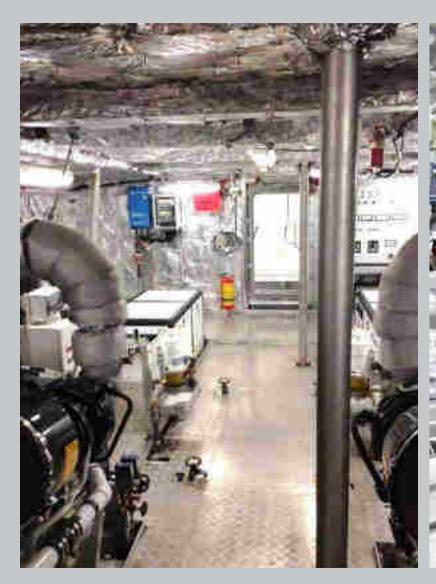
Wind Turbines: South Korea



Marine Applications



Marine Applications







Real Fire Incidents



ELECTRICAL SOURCES ARE RESPONSIBLE FOR 50% OF ALL STRUCTURAL FIRES

Source: National Fire Incident Reporting System, Guidelines

LIGHTING AND ELECTRICAL DISTRIBUTION SYSTEM FIRES CAUSED \$659MILLION OF DAMAGE IN THE US BETWEEN 2010 and 2014 Source: US - National Fire Prevention Report



Electrical Fire



Fire Incidents Results

- In absence of a Fire Suppression System



Electrical Cabinets that "were" Fire Proof!

Fire Incidents Results with FirePro Suppression System

Exploding Condenser in Power Factor Connection Units





POSCO is the largest Steel Manufacturer in Korea and it is ranked within the 5 largest Steel Manufacturers in the world.



The FirePro FP-3000 model was installed in the control room of the 100-ton overhead crane, which is handling the melting furnace of the Steel Mill.

Due to an electrical fault, a fire developed in the control room, and it was immediately extinguished by the FirePro System, without causing any damage to the rest of the electrical components.

WITH FirePro Fire Protection



- FirePro extinguished a starting fire and prevented a large fire which may have possibly caused damages of several millions of Euros.
- At the complex are located 14 companies and are working 750 people.



Boiler room





South Africa

Successful Activation and Fire Suppression at MITTAL STEEL in Newcastle.

A 33KV indoor voltage Transformer exploded in one of the substations due to an electrical fault. The post explosion fire was immediately extinguished by the FirePro system installed in the panel and prevented further potential damage which could have been caused by the spread of the fire.



Fire control panel



Two adjacent sections of the electrical panel. The section next to the explosion was not affected





South Africa

Successful Activation and Fire Suppression at MITTAL STEEL in Newcastle.

On Friday 2007-10-12 at 14:48, A HSM front busbar at one of Mittal Steel's substations experienced a fault; fortunately FirePro was installed in this particular substation, (as is the case in many of Mittal's substations). The following is a quote from the incident report which was written by the electrical engineer Mr. SJ Marais and approved by the plant manager Mr. FR Bezuidenhout.



FirePro units installed in the busbar chamber



Closer view of the damaged feeders

FirePro.

Oman Ministry of Education Directorate - UPS Incident







- Type of Incident: UPS battery fire
- In May 2016 4 x FirePro generators were installed in various locations
- Saturday, 12/08/2017 at about 4:45 pm FirePro system was activated
- Civil Defense immediately arrived at the premises and switched off the building power supply
- FirePro Dealer found that the system was activated after an alarm of the double knock detection system
- UPS Batteries burnt & blasted
- All electronic equipment was cleaned
- FirePro automatic fire extinguishing system's timely intervention prevented a major fire and saved the building
- No damage to the major electronic equipment was reported





Att. Mr. Marion Turkkourin, Technical Manager

To whom may concern

In light of our excellent long cooperation, we are happy, to respond positively to your request to confirm the use of your Fire Pro fire extragaishing systems, by our organization that includes the Coca Cola plant in Nicosia.

Therefore and for your kind use we should hereby like to confirm that we have invalled FirePro fire extinguishing systems in our above mentioned Coca Cola plant in the following areas:

- 1. All electrical distribution boards
- 2. All electrical panels
- 3. All power factoring control units (PFCL's)
- 4. In the central computer/server room.
- 5. Server Rucks.

Furthermore, we also like to state that your systems performed effectively on those occasions, where fire incidents occurred, in the areas where they were installed.

Also we like to clarify that the **FirePro** fire extinguishing systems has been accepted by the insurance and auditors.

We trust that our above statement is sufficient for your needs

Yours proceedy

Costantinos Dalmiran Engineering Manager









Figures Systems Ltd

6 Kommundarias Street & Spyrou Arnousou, Toria Cunt No. 2, 1⁸ & 6th Floor, 3076 Limmol, CYPRUS

P.O. Box: 54000 3720 Limpered. CYPRUS

Door Sitts

We would like to express our special thanks to your PleaPear! Fire Extinguishing Aeronol Bystems for the mecentrial track record on estinguishing fires initiated on two different occasions in our Camelour Supermarket atoms in Cyprus.

- Power P=tor punch Local/Internal Protection (Total Flooding) Carrettour Larroca
- · Power Factor puntls Local/Internal Protection (Total Honling) Carrefour Puphos

Thanks to the quick and effective response of ForeProf Fire Extinguishing Acrossly Systems both fiber water entireprished locally and 4th not spread outside the fire source. Duringes were limited to the defective equipment, which was replaced wron after the event was realized and downline was minimal.

Thank you & Best Regards

Chris Cash & Carry LTD Cross Corpolant

Slemos Michalia IF Manager

WITH FirePro Fire Protection

EAC Reference:

"We are pleased to note that on two separate occasions, one at Sopaz (Nicosia) and the other at H'Paschalis (Paphos) the FirePro systems activated and successfully prevented potentially dangerous fire incidents."





Summary

Technology Advantages

For the Designer

- Simple design
- Modular
- Fail Safe System
- Feasible to protect risks that previously were not possible

For the Client

- No Agent Storage Space needed
- No pressure tests required
- 15 years product life
- Safe for Humans & Environment

For the Installer

- No pressure integrity tests
- Simple & Fast installation
- No Piping







Organization:

MANUFACTURING Manufacturing Technology Insights, International Awards Location: USA Designation:

Solution Provider, TOP 10

Date: June, 2019



Organization:

GBAF Publications. International Awards Location: London, England UK Designation: **Environment Friendly** Date: December, 2018



Organization:

European Quality Awards Location: Paris, France FU Designation: Production Quality Date: October, 2016



Organization:

Skydd & Säkerhet Security Awards

Location:

Stockholm, Sweden EU

Designation:

New Product Introduction

Date: October, 2015



Organization:

SICUR International Location:

Madrid, Spain EU Designation:

New Product Introduction

Date: March, 2012



Organization:

CCCI Federation

Location:

Nicosia, Cyprus EU

Designation:

Manufacturing Sector Date: February, 2012



Organization:

British Standards Institute Location:

Birmingham, England EU

Designation: **BSI Kitemark**

Date: February, 2009



Organization:

XVII FISP. FISST & VIII Fire Show

Location:

Sao Paulo, Brazil

Designation:

Most Innovative Technology

Date: August, 2008



HISWA

Organization:

HISWA Holland Marine Industry

Location:

Amsterdam, Holland EU

Designation:

Most Innovative Product

Date: March, 2002



Why Condensed Aerosol Technology



Technology



Cost-Effective



Environment



Choosing FirePro

- ✓ Environmentally Friendly
- ✓ Global Presence
- ✓ Installations in 110 countries
- ✓ Complies with the best Global Standards
- ✓ Non Pyrotechnic Compound
- ✓ Prestigious Client Database and References





Certified 15-year shelf-life



CFC-free



Non-Oxygen Depleting



HFC-free



Halon Alternative



Zero Ozone Depletion Potential



Non-Pressurized



Zero Global Warming Potential

