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Value in safety... Invest in Quality!

ire suppression systems



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FIRE SUPPRESSION SYSTEM IG - 541





FIRE SUPPRESSION SYSTEM FOR VEHICLE ENGINES "KYDON"







WATER MIST FIRE SUPPRESSION SYSTEM





KITCHEN FIRE SUPPRESSION SYSTEM $I_{A} \Leftrightarrow M \in N \in U_{A}$





The **IDOMENEUS** Domestic Kitchen Extinguishing System Is An Automatic Detection And Suppression System, Without Pressure Or Propellant Gas, For Fats In Cuisines And Barbecue. **The Extinguishing System** Is Designed To Be Specially Suitable For Small Household Kitchens Or Kitchens In Recreational Vehicles Rv And Caravans.

As The Extinguish Agent Has Also Exceptional Properties For Suppressing Solid Material Fires (A Class), The System Can Also Be Used In Other Risk Areas. The **IDOMENEUS**Home Kitchen System Is Installed Above The Corresponding Fire Danger Zone And Aligned So As To Cover The Hazardous Area. The System Detects Reliably A Fire At Its Early Stage And Discharges The Extinguishing Agent And Effectively Extinguishes The Fire At Its Drastic Area

- Testing in Accordance with DIN 14497
- Temperature Activation Capability: 57°C
- Maintenance Free for 5 Years



CERTIFICATION UNDER MOBIAK' S BRAND - NAME

KITCHEN FIRE SUPPRESSION SYSTEM $I_{A} \Leftrightarrow M \in N \in I_{A}$



TREFTCH TING - CASES - HEDICAL ESI: 1977

BUILT - IN SECURITY

AMFE (Automatic Miniature Fire Extinguisher) Reliably Protects Devices And Equipment In Industry, Household And Consumer Electronics Such As Cabinets, Home Appliances, Televisions, Etc. Against The Dangers Of Fire.

The AMFE Detects And Extinguishes The Fire Inside The Device, Preventing The Spread Of A Fire.

AMFE VARIANTS

S-AMFE / AMFE with Sensor Connections

The AMFE Not Only Releases The Extinguishing Gas But Also Signals That It Has. In Installations Where Accessibility Is Limited, The Amfe Can Be Connected To A Monitoring System By Two Connectors For Reading A Signal. Permanently Controlling If The Amfe Has Been Initiated

(E.g. Line Control Through A Plc Or Monitoring Device) Allows For Knowledge About The Status Of Whether And Where A Fire Might Have Started In An Otherwise Hard To Reach Installation. The S - AMFE Is Rated For Typical Plc Signals Of 24v/48v And 1000ma. The Connectors Are Standardized (6,3mm Blade Terminals), But Customizations Are Possible

R-AMFE / AMFE which Can Additionally be Triggered Remotely

The R-AMFE Works Like A Conventional Amfe, Releasing The Extinguishing Gas When The Thermobulb Bursts After The Activation Temperature Has Been Reached By Heat (As In A Sprinkler). Additionally, The R-amfe Can Be Remotely Triggered By Activating A Current Signal Into The R-amfe Causing A Fast And Precise Increase

Of The Heat At The Bulb, Ultimately Resulting In A Burst Of The Thermob-

And Release Of The Extinguishing Gas. R-AMFE Can Also Work Much Faster Than A Traditional Amfe If Controlled By A Monitoring Device Which Also Reads E.g. Smoke Detector Signals And, Upon The Early Detection Of Smoke, Initiates The Signal To Release TheR-AMFE Even Before Significant Enough Heat Buildup. The Applied Current Defines The Time Until The R-AMFE Is Initiated. As Application Requirements For TheR-AMFE Are Customer Specific, Consulting The Manufacturer Is Required To Define Electrical And Mechanical Details To Guaranty Reliable And Sufficient Operation.

AMFE AUTOMATIC MINI FIRE EXTINGUISHER

3M" NOVEC TH

TUV NORD

Precise

B

ulb Assembled

Επιβεβαιωμένη αποτελεσματικότητα από την MPA Dresden Αναφορά δοκιμής Νο. 2013-F-4872

THE FUNCTION

3M[™] NOVEC™

Due To Rising Heat In A Fire Scenario The Pressure Inside The Glass Bulb Increases. After The Predetermined Operating Temperature Of The Heat Sensitive Glass Bulb Is Reached, The Glass Bulb Bursts Into Small Fragments And Triggers A Mechanism That Releases The Gas From The Cylinder.

The Extinguishing Medium Is Released Through The Holes In The Outlet Body And Extinguishes The Fire When The Fire Is Still In An Early Stage. The Quick Operation And The Effective Extinguishing Of The Fire Prevents Further Expansion Of The Fire And And Helps Keeping Damage Small.

THE FUNCTION

- The Advantages At A Glance
- Easy To Use
- Maintenance Free
- Easy To Install (Retrofittable)
- Variety Of Customer Specific Operating & Releasing Temperatures Available
- No Water Being Used (Gas)
- Scalable
- Robust And Shock Tolerant
- Usable In Various Applications (Home, Industry, Automotive, Etc.)
- Mechanical Release; No Electric Power Supply Required
- Release Mechanism: Qualified In The Automotive And Sprinkler Industry

TJV NORD CERTIFIED

THE CHALLENGE

Washing Machines, Televisions Or Industrial Power Supplies – Fires In Technical Devices Are A Continuously Increasing Serious Threat. And Not Only At Homes, Damages Caused By Fires Are Increasing. There Is Also A Significant Risk Of Fire In The Industry And Automotive Sector. Another Example Are Highly Valued Collections Which Are Subject To Persistent Fire Hazard. The Challenge Is To Automatically, Energy-supply Independently, Detect And Extinguishing Fires Already In The Early Stage Stage, Consequently Providing More Safety. A System Is Needed, That Can Extinguish These Fires Reliably, Fast And Easily At Any Time And Without External Resources Inside A Housing.

AMFE AUTOMATIC FIRE EXTINGUISHER



NEV

AUTOMATIC FIRE EXTINGUISHER WITH SENSORS AND MANUAL ACTIVATION

ERP CODE	CODE	PRODUCT DESCRIPTION
0128126	MBK18-APM-NVC24	CYLINDER AMFE 24ml NOVEC 1230 - VOLUME PROTECTION (Class A: 0.06m3 Class B: 0.04m3)
0128127	MBK18-APM-NVC72	CYLINDER AMFE 72ml NOVEC 1230 - VOLUME PROTECTION (Class A: 0.19m3 Class B: 0.14m3)
0128128	MBK18-APM-NVC120	CYLINDER AMFE 120ml NOVEC 1230 - VOLUME PROTECTION (Class A: 0.32m3 Class B: 0.23m3)
0128118	MBK18-APM-NVC241	CYLINDER AMFE 241ml NOVEC 1230 - VOLUME PROTECTION (Class A: 0.64m3 Class B: 0.46m3)
0128129	MBK18-APM-NVC360	CYLINDER AMFE 360ml NOVEC 1230 - VOLUME PROTECTION (Class A: 0.96m3 Class B: 0.69m3)
0128130	MBK18-APM-NVC603	CYLINDER AMFE 603ml NOVEC 1230 - VOLUME PROTECTION (Class A: 1.61m3 Class B: 1.15m3)
0141150	MBK16-APM-SPR68	NOZZLE AMFE SPRINKLER TYPE 68°C
0149074	MBK16-APM-SPR79	NOZZLE AMFE SPRINKLER TYPE 79°C
0149080	MBK16-APM-SPR93	NOZZLE AMFE SPRINKLER TYPE 93°C
0149081	MBK16-APM-SPRD68	NOZZLE AMFE SPRINKLER TYPE 68°C WITH SENSORS
0149082	MBK16-APM-SPRD79	NOZZLE AMFE SPRINKLER TYPE 79°C WITH SENSORS
0149083	MBK16-APM-SPRD93	NOZZLE AMFE SPRINKLER TYPE 93°C WITH SENSORS
0149084	MBK16-APM-RPRD68	NOZZLE AMFE SPRINKLER TYPE 68°C WITH SENSORS AND MANUAL ACTIVATION
0149085	MBK16-APM-RPRD79	NOZZLE AMFE SPRINKLER TYPE 79°C WITH SENSORS AND MANUAL ACTIVATION
0149086	MBK16-APM-RPRD93	NOZZLE AMFE SPRINKLER TYPE 93°C WITH SENSORS AND MANUAL ACTIVATION
0149087	MBK18-APM-NVC24-BRACKET	BRACKET FOR INSTALLATION OF 24 ML NOVEC AMFE
0149088	MBK18-APM-NVC72-BRACKET	BRACKET FOR INSTALLATION OF 72 ML NOVEC AMFE
0149089	MBK18-APM-NVC120-BRACKET	BRACKET FOR INSTALLATION OF 120 ML NOVEC AMFE
0149090	MBK18-APM-NVC241-BRACKET	BRACKET FOR INSTALLATION OF 241 ML NOVEC AMFE
0149091	MBK18-APM-NVC360-BRACKET	BRACKET FOR INSTALLATION OF 360 ML NOVEC AMFE
0149092	MBK18-APM-NVC603-BRACKET	BRACKET FOR INSTALLATION OF 603 ML NOVEC AMFE

FOR CLASS A TYPE OF FIRE THE CALCULATION HAVE BEEN MADE ACCORDING TO NFPA2001 (4.2% CONCENTRATION) STANDARD FOR CLASS B TYPE OF FIRE THE CALCULATION HAVE BEEN MADE ACCORDING TO NFPA2001 (5.9% CONCENTRATION) STANDARD

0149093

0149094

0149102

0149095

At Home, As Well As In The Industry, There Are Countless Technical Devices And Appliances To Support Our Modern Daily Life. Most Of This Equipment Are Electronic Products Of Some Sort. It Can Be Computers, Dishwashers Or Dryers, Entertainment And Lighting Equipment, Switchboards Or Smart Home Devices. In The Industry, Computer Hardware, Electronic Equipment, Electric Cabinets And Pcb Boards Can Be Found Pretty Much Everywhere.

	NEW
MBK16-EBULB-5X20-1A	Extinguishing Bulb NOVEC 1A (5x20)mm
MBK16-EBULB-5X20-5A	Extinguishing Bulb NOVEC 5A (5x20)mm
MBK16-EBULB-5X20-10A	Extinguishing Bulb NOVEC 10A (5x20)mm
MBK16-EBULB-5X20-16A	Extinguishing Bulb NOVEC 16A (5x20)mm

0149096	MBK16-EBULB-5X40-1A
0149097	MBK16-EBULB-5X40-5A
0149103	MBK16-EBULB-5X40-10A
0149098	MBK16-EBULB-5X40-16A

0149104	MBK16-EBULB-7X40-1A
0149105	MBK16-EBULB-7X40-5A
0149106	MBK16-EBULB-7X40-10A
0149107	MBK16-EBULB-7X40-16A

16A	Extinguishing Bulb NOVEC 16A (5x40)mm
-1A	Extinguishing Bulb NOVEC 1A (7 x 40)mm
5A	Extinguishing Bulb NOVEC 5A (7 x 40)mm
10A	Extinguishing Bulb NOVEC 10A (7x 40)mm

Extinguishing Bulb NOVEC 1A (5x40)mm

Extinguishing Bulb NOVEC 5A (5x40)mm

Extinguishing Bulb NOVEC 10A (5x40)mm

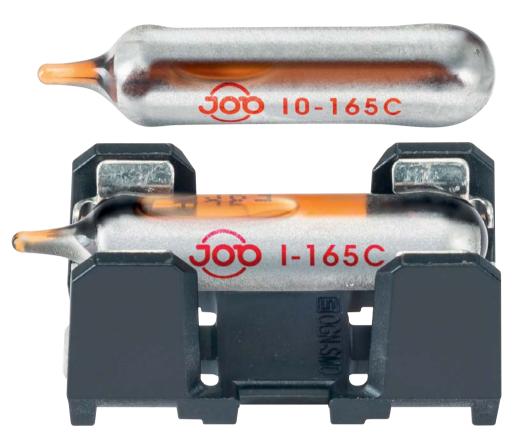
Extinguishing Bulb NOVEC 16A (7x 40)mm

		1
0149108	MBK16-EBULB-5X20-HOLDER	BRA
0149109	MBK16-EBULB-5X40-HOLDER	BRA
0149110	MBK16-EBULB-7X40-HOLDER	BRA

ACKET FOR MOUNTING Extinguishing Bulb NOVEC (5x20)mm ACKET FOR MOUNTING Extinguishing Bulb NOVEC (5x40)mm ACKET FOR MOUNTING Extinguishing Bulb NOVEC (7x40)mm









While Having All These Products Makes Life More Comfortable, They Also Pose An Increased Danger Of Electrical Faults, Or Even Fires. Globally, More Than 30% Of All Fi Res Are Caused By Electric Or Electronic Equipment Or Installations. With The Inherent Risk Of Fire From Electric Devices, Danger For Life And Loss Of Property Or Equipment Values Increases With The Number Of Such Devices Around Us.

Following The Vision "a World Where Everyone Is Protected Against The Dangers Of Fire, Everywhere And Anytime", We Have Developed Solutions To Detect And Extinguish Electric Fires When They Are Still Small And In An Early Stage. With The Internationally Protected E-bulb, We Have Designed A Reliable System That Detects Heat Inside An Electric Device (E.g. From Fire), Extinguishes The Fire And – Most Importantly – Prevents A Fire From Re-igniting By Interrupting The Electric Power Supply.

THE ADVANTAGES AT A GLANCE

- Thermo Bulbs Are Proved Safety Products
- Easy To Install
- Operating Temperatures (Ambient, Triggering) Can Be Customized
- Maintenance Free
- Novec[™] 3m[™] Poses No Health Hazard
- Retrofittable Into Existing Designs
- Non-corrosive Extinguishing Agent
- Zero Odp / Non Ozone Hazard • Non - Reactive With Other Materials
- Can Be Used As A Passive Fire Detection And Extinguishing Device (No Power Interruption)
- Non Conductive Extinguishing Agent
- Reduces Alternative Fault-protection Needs On PCBs

EXTINGUISHING BULB (E-BULB)



THE SOLUTION

For Protecting Life And Property, In Worldwide Spray Industry, There Are Used With Total Success Temperature Activated Thermo Bulbs. Thermo Bulb Breaks At Predefined Temperaturenozzle Opens And Discharges The Agent At Fire For Effective Suppression. Thermo Bulb E-bulb Is The Next Step In Product Development Which Uses The Trusted Sprinkler Technology.

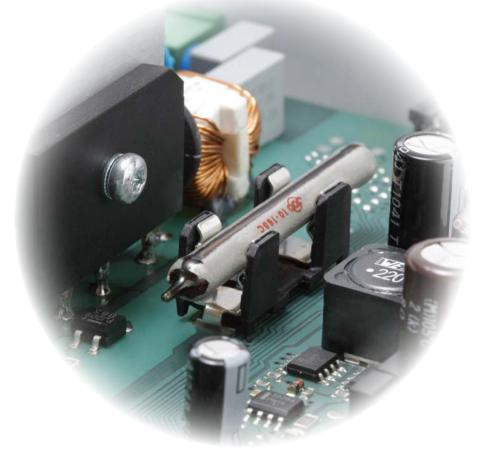
FUNCTION

E - Bulb Is Filled With 3m[™] Novec[™] Engineered Fluid. This Non-toxic, Non-conductive Extinguishing Liquid Is Released Into The Device When The Defined Temperature Is Reached And The Thermo- Bulb Bursts. After Being Initiated, The E-bulb Extinguishes The Fire, And Interrupts The Electric Current. Transition-free, The Liquid Immediately Converts Into Gas. As A Result Of Cooling And (Partly) By Oxygen Reduction, A Fire On A Pcb Will Be Extinguished Within Seconds. And, Because The Current Flow Over The E-Bulb Is Interrupted, The Electric Fire Cannot Re-ignite!

APPROVALS AND REFERENCES

- Effectiveness Verification by MPA Institute Dresden
- Effectiveness Verified by UL
- VDE Information Testing Successfully Accomplished
- UL Listed





SPECIFICATIONS

	Dimensions (standard)		
	Ø 5 x 20 mm	Ø 5 x 40 mm	Ø 7 x 40 mm
Sensitivity [s] ¹	48	48	48
Gas volume V [ml]	16,6	42,0	88,5
Protected Volume $V_{4\%}$ [ml] ²	416	1,049	2,212
Protected Volume $V_{4\%}$ [oz] ²	14	35 1/2	75

E-Bulb is available in a variety of electrical specifications

Currents:	Class 1: <1A	Class 2: <5A	Class 3: <10A	Class 4: <16A
Voltages:	0250V AC / DC			



FIREFIGHTING - GASES - MEDICAL 451. 1977

LOCAL APPLICATION FIRE SUPPRESSION

FIRE SUPPRESSION SYSTEM "MOBIAK DIAS" ABF - WET CHEMICAL





FIRE SUPPRESSION SYSTEMS

ANPI CERTIFICATION OF THE SYSTEM IN THE BRANDNAME OF MOBIAK

TECHNICAL DESCRIPTION

In Both Professional And Domestic Kitchens The Equipment Functions With The Use Of Electrical Power And/or Of Gas-propane. In These Areas, Large Quantities Of Flammable Materials Are Used, Such As Cooking Oils And Fats, Which Are Dangerous

To Ignite. Based On The Relevant Legislation, The Appropriate Extinguishing Agent Used For Such Fires Has To Be Of Category (F) - Cooking Oils & Fat.

The Fire Extinguishing Agent Mobiak Uses, Commercially Named As Abf-wet Chemical, Is Approved By The Fire Brigate Headquarters For Suppression Of Class (A), (B) And (F) Fire - Solid And Liquid Fuels, Cooking Oils & Fats.

This Fire Extinguishing Agent (Abf-wet Chemical) Is A Carboxylic Acid Salt Which Suspends Fires By Creating A Saponified Layer (Crust) That Prevents Oxygen From Interacting With The Burning Surface, Cools Down The Area And Eliminates The Possibilities For Re-ignition. The Low Acidity Level (Ph:9 At 20°c) Prevents Any Damage Caused To Surfaces Made Of Stainless Steel.

The Electromechanical Fire Suppression System With The Commercial Name "MOBIAK DIAS" Uses The Abf-wet Chemical Extinguishing Agent And The Most Advanced, Efficient, Reliable & Certified Fire Detection Solution Method In The Direct & Effective (F) Category Fire Suppression For Professional Kitchens. Fire Is Detected By An Approved (UI/fm) Linear Heat Detection Cable Of Activation Temperatures 138°c, 180°c Or 251°c, The Installation Of Which Is Particularly Quick & Simple. This Cable Is Connected With A Control Panel That Controls The Automatic Operation Of The System.



ANPI APPROVED

FIRE SUPPRESSION SYSTEMS

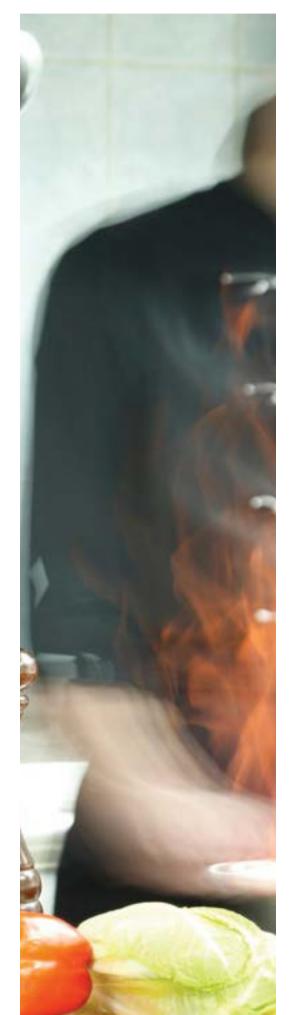
LOCAL APPLICATION FIRE SUPPRESSION

ANPI CERTIFICATION OF THE SYSTEM IN THE BRANDNAME OF MOBIAK

FIRE SUPPRESSION SYSTEM "MOBIAK DIAS" ABF - WET CHEMICAL







In Automatic Operation, Incase Of Fire The Detection Cable Is Activated And Transmits A Signal To The Control Panel Of The System That Executes Constant Visual- Acoustic Alarm Through A Built-in Siren With Beacon. After The Pre-configured Time Delay (Can Be Set From 0-80 Sec) The Control Panel Transmits A Signal To The Fuse Of The Fire Extinguisher Valve Resulting The Activation Of The Valve And The Flow Of The Agent Through The Pipe Network To Special Discharge Nozzles.

In Manual Operation, The System Can Be Activated By Electrical Means By A) An Extinguish Button That Is Built-in To The Control Panel Or B) An Electrical Remote Call Point That Must Be Installed Near To The Kitchen Exit Or By Mechanical Means By A) A Metal Wire Pull-handle Mechanism That Must Be Also Installed Near To The Kitchen Exit Or B) By Pulling The Valve Rod Of The Fire Extinguisher Valve.

The System Can Be Designed As Total Or Local Flooding

System Includes

- CE-EN3 Approved Local Application Fire Extinguishers with Certified Valve of Automatic & Manual Operation
- Vessels with Internal Plastic coating of 6Lt, 9Lt, 11-16Lt, 17-20Lt and 21-35Lt Extinguishing Agent Capacity
- Stainless Steel Vessels of 10Lt and 11-20Lt Extinguishing Agent Capacity
- Heavy duty Extinguisher brackets
- Certified Detonator used for the Automatic Activation of the system
- Stainless Steel Flexible Hose for connecting the Extinguisher Valve Output to pipe network
- Linear Heat Detection Cable of Activation Temperatures 138°C, 180°C or 251°C
- Porcelain Splice Connectors for connecting Detection Cables of different Activation Temperatures

- Stainless Steel Straps used for Linear Heat Detection Cable support
- Fire Tape for Linear Heat Detection Cable connections insulation
- Remote Pull Handle Mechanism
- 2.2KΩ Resistor for monitoring the Proper Operation of the Detection Line
- Remote Control Extinguish Button
- ½" Male Thread Stainless Steel
 Discharge Nozzles of Different Flow
 rates with inflammable Silicon Caps
- 1 Zone Control Panel with:
 Battery
- Siren Beacon

- Activation Button

- Detonator Time Delay Set By Factory To 40 Seconds (It Can Be Set From 0 - 80sec)
- Factory Connected Extinguish Cancel Button With 2m Cable
- Factory Connected White Cable For Power Supply With Suko Plug (2m Length)
- Factory Connected White Cable With Plastic Splice Connector Of 2 Contacts For Connecting The Detonator Of The System (2m Length)
- Factory Connected Orange Cable With Plastic Splice Connector Of 2 Contacts For Connecting The Linear Heat Detection Cable (2m Length) Output Relay For Electrical Power Shut Down Of Selected Kitchen Appliances And Air Duct Fans As Well As For Shut Down Of Fuel (Gas)
- Gas / Propane Electro-mechanical Switching Valve (Is Not Included)

ANPI APPROVED





LOCAL APPLICATION FIRE SUPPRESSION

FIRE SUPPRESSION SYSTEMS $AL \in XANA \in R$ THE $CR \in AT$ [®]

KITCHEN FIRE SUPPRESSION SYSTEM "ALEXANDER THE GREAT"





LPCB APPROVED

KITCHEN FIRE SUPPRESSION SYSTEM

LBCB CERTIFICATION OF THE SYSTEM IN

THE BRANDNAME OF MOBIAK

CFR

LPS 1223: Issue 2.3 LPCB Cert REf. 1534a

• Easy / Flexible Installation

• Highly Economical

Quick & Effective Suppression

• No Electricity Or Moving Parts

FIRE SUPPRESSION SYSTEMS ALEXANDER THE CREAT®

1. Quick & Easy Installation:

The Flexible Sensor Tubing Is Easily Installed Directly Inside The Extractor Hood -Directly Above Cooking Areas.

When In Service, The Tubing Is Pressurized With Nitrogen At 16 Bar. The Dynamics Of Pressurization Make The Tubing More Reactive To Heat.

2. Early Fire Detection:

If A Flame-up Occurs, The Heat Of The Fire Causes The Pressurized Sensor Tube To Burst At The Hottest Spot.

3. Instant Suppression:

The Sudden Tube Depressurization Actuates The Special Pressure Differential Valve And Instantly The Agent Is Discharged By Special Nozzles. The Fire Is Quickly Suppressed Just Moments After It Began Minimizing Damage And Downtime.

THE PNEUMATIC TUBE DIFERENCE

Great Alexander System Uses A Proprietary Continuous Linear Sensor Tube That Reliably Detects And Actuates Release Of The Extinguishing Agent Using Pneumatic Technology. It Is Flexible, Space Efficient And Cost Effective Detection System.

Available in 3 Different Sizes - Versions:

- 9Lt Version with 4 Discharge Nozzles
- 12Lt Version with 6 Discharge Nozzles
- 16Lt Version with 8 Discharge Nozzles

FIREFIGHTING - GASES - MEDICAL eff. (87)

LOCAL APPLICATION FIRE SUPPRESSION

FIRE SUPPRESSION SYSTEM "ACHILLES" ABF - WET CHEMICAL



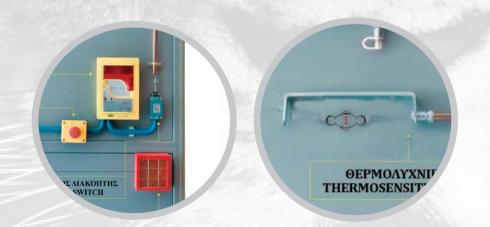
FIRE SUPPRESSION SYSTEMS $A < H = 1 \le 5^{\circ}$

The Electromechanical Fire Suppression System Under The Brand Name "ACHILLES" Is Among The Detection & Suppression Systems For Class (F) Fires, Used In Domestic And Professional Kitchens.

The System Is Equipped With Automatic & Manual Activation Mechanism And It Is Different From The System "μοβιακ-dias" In The Detection Mechanism Of Fire. Instead Of The Linear Heat Detection Cable, The System Uses Thermal-sensitive Fusible Detectors Connected With Each Other With Metal Wire. The Thermal-sensitive Fusible Detector Detects A Potential Source Of Fire In The Protected Area Of The Kitchen & Hood As Well As In The Ventilation Ducts. Available Activation Temperatures For The Thermal-sensitive Fusible Detectors Are 138°c, 180°c And 250°c.

In Case Of Fire, The Breaking-melting Of Any Thermo-sensitive Fusible Detector (138°c, 1820c Or 250°c), Activates The System By Electromechanical Means. The Fusible Detectors Are Connected In A Rowform Through A Stainless Steel Metal Wire. The First End Of The Metal Wire Is Fixed To The Exhaust Hood While The Other End Is Connected To An Electro-mechanical Position Switch. In Normal Condition, The Metal Wire Is Stretched And It Pulls The Contact Of The Position Switch.

In Case Of Fire, The Fusible Of The Detector Breaks-melts And The Metal Wire That Connects The Detectors With The Position Switch Gets Loosen. The Looseness Of The Metal Wire Allows The Contact Of The Position Switch To Close And So The Switch Gets Activated. Once The Position Switch Gets Activated, It Transmits A Signal To Control Panel Of The System That Executes Constant Visual-acoustic Alarm Through A Built-in Siren With Beacon. After The Pre-configured Time Delay (Can Be Set From 0-80sec) The Control Panel Transmits A Signal To The Fuse Of The Fire Extinguisher Valve Resulting The Activation Of The Valve And The Flow Of The Agent Through The Pipe Network To Special Discharge Nozzles.





FIRE SUPPRESSION SYSTEMS $A < H = 1 \le 5^{\circ}$

LOCAL APPLICATION FIRE SUPPRESSION FIRE SUPPRESSION SYSTEM "ACHILLES" ABF - WET CHEMICAL



The First End Of The Metal Wire Is Fixed To The Exhaust Hood While The Other End Is Connected To An Electro-mechanical Position Switch. In Normal Condition, The Metal Wire Is Stretched And It Pulls The Contact Of The Position Switch. In Case Of Fire, The Fusible Of A Detector Breaks-melts And The Metal Wire That Connects The Detectors With The Position Switch Gets Loosen. The Position Switch Gets Activated And It Activates Through The Fire Detection Panel Of The System The Fire Extinguisher Valve (Through The Fuse-detonator) And Then The Suppression Agent Is Distributed Through The Pipe Network And The Discharge Nozzles Over The Protected Areas.

The Manual Activation Of The System Can Be Done In Three (3) Different Ways (1) Pressing Of The Special Manual System Activation Button That Is Built-in Into The Fire Detection Panel, (2) Pulling Of The Remote Control Mechanical Metal Wire Handle And (3) Pulling Of The Fire Extinguisher Valve Rod Towards The Ground-floor.

System Includes

- CE EN3 Approved Local Application Fire Extinguishers with Certified Valve of Automatic & Manual Operation
- Vessels with Internal Plastic Coating of 6Lt, 9Lt, 11-16Lt, 17-20Lt and 21-35Lt Extinguish Agent Capacity
- Stainless Steel Vessels of 10Lt and 11-20Lt Extinguishing Agent Capacity
- > Heavy duty Extinguisher brackets
- Certified Detonator used for the Automatic Activation of the System
- Stainless Steel Flexible Hose for connecting the Extinguisher Valve Output to pipe network
- ½" Male Thread Stainless Steel Discharge Nozzles of different Flow Rates with inflammable Silicon Caps
- Ακροφύσια Εκτόξευσης Κατασβεστικού Υλικού
- Thermal sensitive fusible detectors, 138°C, 182°C, 250°C
- Detector bases

- Stainless Steel metal wire and clutches
- Remote pull Handle Mechanism
- > 90° metal wire guide roller
- 2.2KΩ Resistor for monitoring the proper function of detection line
- Position switch
- Remote control electric extinguish button
- Cancel Button
- 1 Zone Control panel:
 - Battery
 - Siren Beacon
 - Button Activation
 - Preconfigured (40sec) time delay (can be adjusted 0-80sec)
- Gas / Propane Electro mechanical switching valve
- Extinguish Cancel button
- Remote control Electric Extinguish Button



FIREFIGHTING - GASES - MEDICAL 651. 1977

HFC-227ea FIXED FIRE SUPPRESSION SYSTEM VDS CERTIFIED UNDER MOBIAK BRAND NAME

Most used Clean Agent as Replacement for Halon 1301 Globally

VDS CERTIFIED





Approval N° S **318003**







HFC-227ea FIXED FIRE SUPPRESSION SYSTEM



HFC-227ea Is An Extinguishing Agent Used With Success As A Replacement Of Halon 1301 In Various Appliances. It Is Odorless, Transparent Non-conductive And Suitable For Suppression Of A Class (Combustible Materials) And B Class (Flammable Liquids) Fire. It Is A Very Sufficient Extinguishing Agent That Provides Fire Protection For Electrical Equipment In Rooms Such As Control Rooms, Communication Centers, Etc. The Minimum Agent Concentration For A Class Fires Is 5,8% And The Concentration That Applies Is 7,5% (Very Low Compared To Other Halon's 1301 Substitutes)

HFC-227ea Requires Minimum Storage Capacity Compared To Other Suppression Systems Like CO₂ And Ig. It Is Stored Under Pressure With Nitrogen At 25bar Or 42bar At 20°c And Stored In Steel Cylinders With Certified Valves.

HFC-227ea is an Extinguishing Agent Based On ISO14520, UNE23572 & NFPA2001 Requirements.

- Excellent Price / Performance Ratio
- Robust Design, Low Maintenance Costs
- Rapid Extinguishing Effect
- Safe For Use In Occupied Areas
- No Extinguishing Agent Residues, Neither Corrosive Nor Electrically Conductive
- Available Cylinder Sizes: 14.5, 32, 50, 90, 120, 150 Liters
- Pressurized At 25bar Or 42bar At 20°c
- Single Or Multi Cylinder Systems
- Single Or Multi Zone Systems
- Simple Design And Hydraulic Calculation Available After Order By Using Vds Software.
- Higher Operating Pressure Possible Than Comparable Systems, So
- Bigger Pipe Network And
- Multi Zone Systems Can Be Achieved
- Compact And Space Saving
- Worldwide Recognized And Approved Extinguishing Agent

GENERAL SPECIFICATIONS

- Replacing Halon
- Fast Extinguishing
- \bullet High Effective, low Concentration of Extinguishing Agent ($7.5\,\%$)
- Low Storage Pressure (25bar or 42bar) and Silent Discharge
- Requires Minimal Storage Space
- Leaves No Residue after Application
- Non Conductive
- UL Listed Extinguishing Agent
- VDS Certified Valves, Discharge Nozzles and Spare Parts

APPLICATIONS

- Control Rooms
- Computer Rooms
- Archives, Libraries
- Schools, Telecommunications
- Workshops, Petrochemical Facilities, Museums, Art Exhibitions, etc.

FK-5-1-12 FIXED FIRE SUPPRESSION SYSTEM VDS CERTIFIED UNDER MOBIAK BRAND NAME

FK-5-1-12 is An Extinguishing Agent Based On ISO14520, UNE23572 & NFPA2001 Requirements.

- Excellent Price / Performance Ratio
- Robust Design, Low Maintenance Costs
- Rapid Extinguishing Effect
- Safe For Use In Occupied Areas
- No Extinguishing Agent Residues, Neither Corrosive Nor Electrically Conductive
- Available Cylinder Sizes: 14.5, 32, 50, 90, 120, 150 Liters
- Pressurized At 25bar Or 42bar At 20°c
- Single Or Multi Cylinder Systems
- Single Or Multi Zone Systems
- Simple Design And Hydraulic Calculation Available After Order By Using Vds Software.
- Higher Operating Pressure Possible Than Comparable Systems, So
- Bigger Pipe Network And
- Multi Zone Systems Can Be Achieved
- Compact And Space-saving
- Worldwide Recognized And Approved Extinguishing Agent

GENERAL SPECIFICATIONS

- Alternative to Halon
- High efficiency with Low Extinguishing Concentration (5.3%)
- FK-5-1-12 Agent looks like Water but does not wet objects
- High Safety Margin (79 % secure)
- Minimum Installation Footprint
- Environmentally Friendly
- Atmospheric Lifetime only 5 days
- Not restricted by the Kyoto Protocol
- Has Low Viscosity and Easy Handling
- Non toxic, non corrosive and electrically non conductive
- Easy to Refill
- No restrictions for sea, air or land transport
- International adoption of ISO 14520-5, NFPA 2001
- UL Listed Extinguishing Agent
- VDS Certified valves, discharge nozzles and spare parts

APPLICATIONS

FK-5-1-12 system can be effectively used in Total Flooding applications in the following areas:

- Data Processing Rooms
- Telecommunications, Communications Centers, Server Rooms
- Computer Rooms
- Cargo Ships and Vehicles
- Engine Compartments
- False Floors and Ceilings
- Archives, Museums, Libraries, etc.

FK-5-1-12 FIXED FIRE SUPPRESSION SYSTEMS $TH \in S \in U \leq^{\mathbb{B}}$

VDS CERTIFIED

dS

USEFUL FOR FIRE WHERE WATER WILL BE HARMFUL

FK-5-1-12





FIREFIGHTING - GASES - MEDICAL GEL 1977

FIRE SUPPRESSION SYSTEMS

A COMPLETE DETECTION & SUPPRESSION PRE - ENGINEERED SYSTEM FOR CNC MACHINES



•CO₂ or FM200 Extinguishing Agent

- Easy / Flexible Installation
- Quick & Effective Suppression
- Fully Mechanical Activation
- Highly Economical

Reduces Even the Most Critical CNC Machines Fire Risks:

- Combustion Of Oil Residues Or Machined Metals Due To Coolant System Malfunction, Tool Breakage Or Improper Maintenance.
- Extensive Machine Repair
- Late Orders Due To Downtime
- Extensive Cleanup If Sprinkler System Actuates

PNEUMATIC TYPE SYSTEM DIFFERENCE

Pneumatic Type Systems Use A Proprietary Continuous Linear Sensor Tube That Reliably Detects And Actuates Release Of The Extinguishing Agent Using Pneumatic Technology. It Is More Flexible, Space Efficient And Cost Eff Ective Detection Method.

1. Quick & Easy Installation Directly Inside Cnc Machines:

The Flexible Sensor Tubing Is Easily Installed Directly On The Walls And Roof Of The

Machine Enclosure.when In Service, The Tubing Is Pressurized With Nitrogen At 16 Bar.the Dynamics Of Pressurization Make The Tubing More Reactive To Heat.

2. Early Fire Detection:

If A Flame-up Occurs, The Heat Of The Fire Causes The Pressurized Sensor Tube To Burst At The Hottest Spot (Approx. 110°c).

3. Instant Suppression:

The Sudden Tube Depressurization Actuates The Special Pressure Differential Valve

And Instantly Floods The Entire Machine Area With Co2 Or Fm-200 Extinguishing Agent. The Fire Is Quickly Suppressed Just Moments After It Began Minimizing Damage And Downtime.

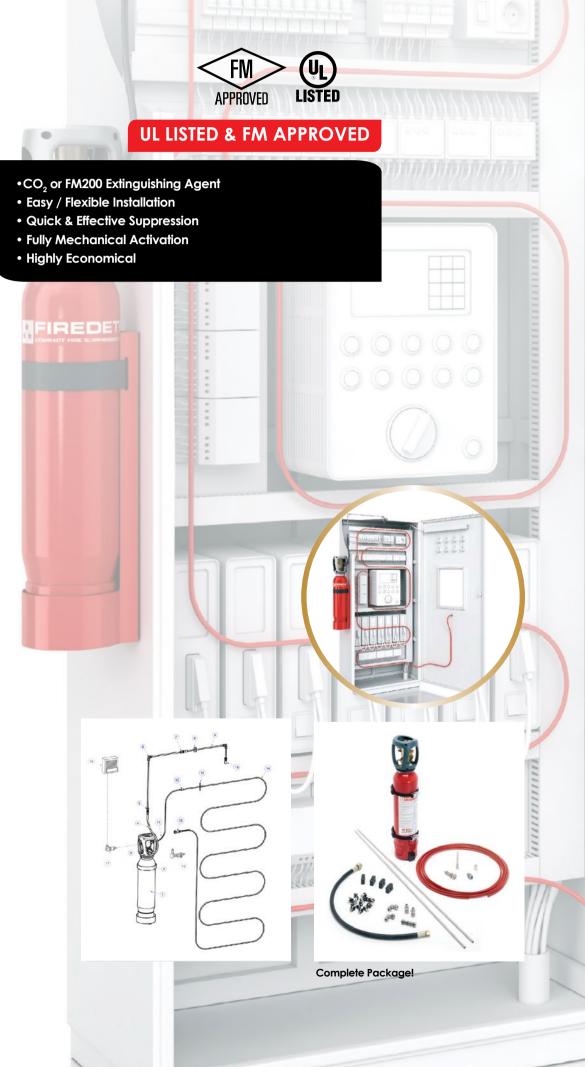


A/A	QTY	Description
1	1	Cylinder/valve assembly
2	1	Cylinder bracket
3	1	Gasket
4	1	Rubber hose
5	1	Tube fitting - straight
6	1	Tube fitting - Elbow
7	1	Cross panel - fitting
8	6	Pipe bracket (Φ8mm)
9	3	Stainless steel tubing (1m)
10	1	Tube fitting - Elbow - G ¼ "
11	1	Nozzle
12	1	Protection spring top
13	1	Cross panel - fitting
14	20	Screw clips for tube attachment
15	1	FireDETEC Tube red (10m)
16	1	Protection spring for sensor tubing
17	1	Manuel release device
	IONA	
18 19	1	Pressure switch Alarm box

FIRE SUPPRESSION SYSTEMS

COMPLETE SYSTEM FOR ELECTRICAL CABINETS

COMPLETE DETECTION & SUPPRESSION PRE - ENGINEERED SYSTEM FOR ELECTRICAL CABINETS



Reduces Even The Most Critical Electrical Fire Risks:

- Combustion From Short Circuits, Overloading Or Overheating
- Extensive Damage To Circuitry
- Work Stoppage
- Extensive Cleanup If Sprinkler System Discharges

PNEUMATIC TYPE SYSTEM DIFFERENCE

Pneumatic Type Systems Use A Proprietary Continuous Linear Sensor Tube That Reliably Detects And Actuates Release Of The Extinguishing Agent Using Pneumatic Technology. It Is Flexible, Space Efficient And Cost Effective Detection Method.

1. Quick & Easy Installation Directly Inside Electrical Cabinets:

The Flexible Sensor Tubing Is Easily Installed Inside The Electrical Cabinet, Directly Above The Wires And Circuity Where A Fire Could Start.when In Service, The Tubing Is Pressurized With Nitrogen At 16 Bar. The Dynamics Of Pressurization Make The Tubing More Reactive To Heat.

2. Early Fire Detection:

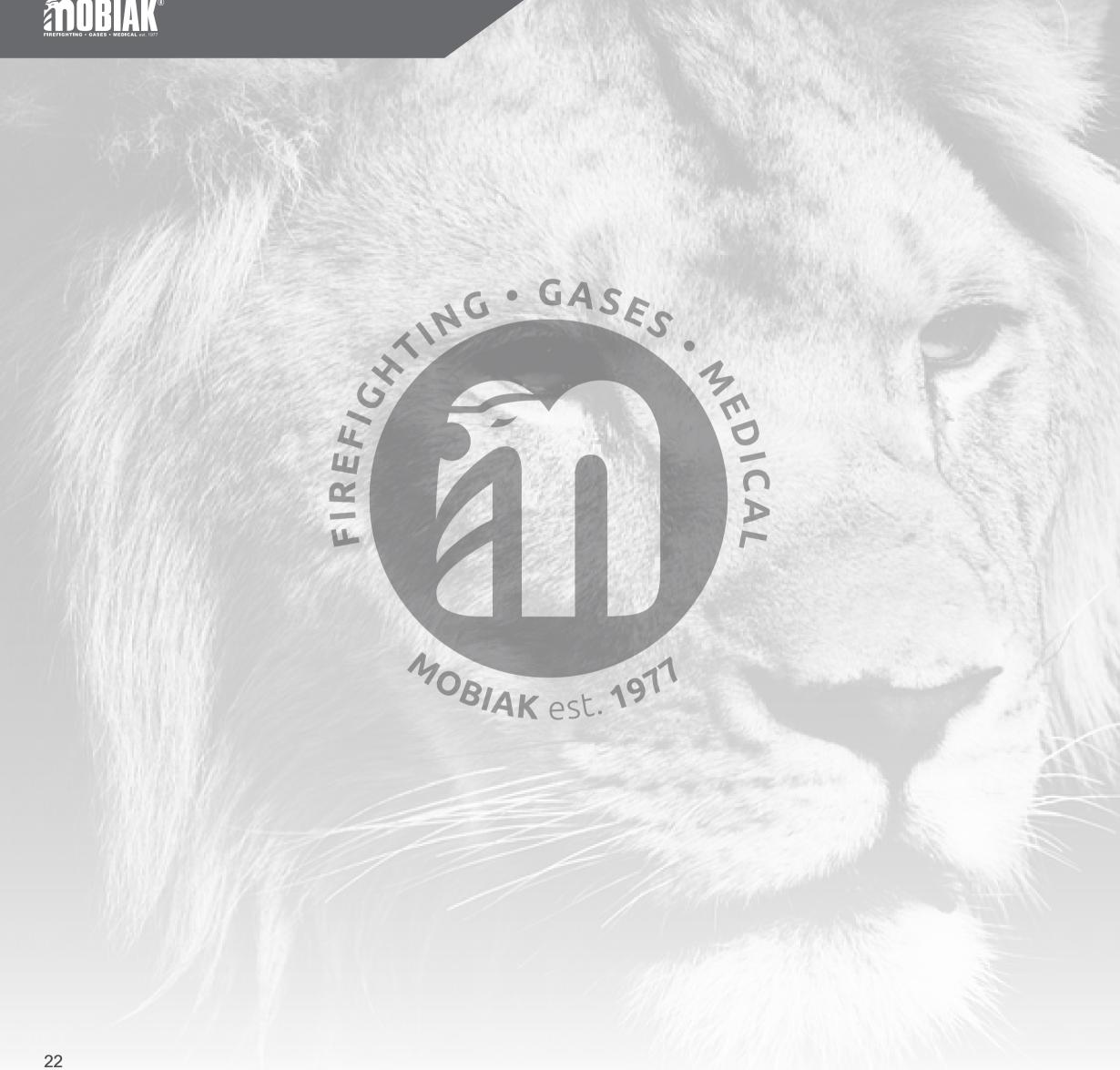
If A Flame-up Occurs, The Heat Of The Fire Causes The Pressurized Sensor Tube To Burst At The Hottest Spot (Approx. 110°c).

3. Instant Suppression:

The Sudden Tube Depressurization Actuates The Special Pressure Differential Valve And Instantly Floods The Entire Cabinet Area With Co2 Or Fm-200 Extinguishing Agent. The Fire Is Quickly Suppressed

	<u> </u>			
A/A	QTY	Description		
1	1	Cylinder/valve assembly		
2	1	Cylinder bracket		
3	1	Gasket		
4	1	Rubber hose		
5	2	Tube fitting - straight		
6	2	Tube fitting - Elbow		
7	1	Cross panel-fitting		
8	4	Pipe bracket (Ф8mm)		
9	2	Stainless steel tubing (1m)		
10	1	Nozzle		
11	1	Protection spring top		
12	1	Cross panel - fitting		
13	20	Binding ties		
14	1	Firedetec tube red (10m)		
15	1	End of line adapter		
OPT	IONA	L		
16	1	Manual release device		
17	1	Pressure switch		
18 1 Alarm box				
_ 10				







DRY POWDER LOCAL APPLICATION SYSTEM FOR PETROL STATIONS



FIRE SUPPRESSION SYSTEMS

The Greatest Danger In A Petrol Station Is That Fire Fuels Are Highly Flammable Liquids That Can Create Explosive Steams Even In Very Low Temperature.

Dry Powder Is A Fire Suppression Agent Appropriate For Solid, Liquid And Gas Fuels.

In Petrol Stations Pumps It Is Required From Specific Law Regulations The Installation Of Automatic Dry Powder Fire Detection & Suppression System With Alarm Signal And Automatic As Well As Manual Operation.

The Purpose Of The Installation Of An Automatic Fire Detection & Suppression System Is The Fast Detection Of The Fire With Sound And Visual Alarm Signals Inside The Controlled Area And Finally The Suppression Of The Fire By The Specialized Extinguishing Means Of The System.

Mobiak Dry Powder Fire Suppression System Can Operate Both Automatically (Activated Through Detection System) And Manually (Manual Activation Mechanisms) And Is Highly Recommended For The Fire Detection And Suppression In The Area Of The Pumps.

During Automatic Operation, The Pair Of Smoke And Heat Detectors Intalled Over Each Pump, Detects The Fire And They Transmit Alarm Signal To The Control Panel Of The System.

It Follows A Continuous Audio-visual Alarm And After Some Seconds (Detonator Time Delay), The Panel Activates The Extinguisher Valve Resulting The Extinguishing Agent To Flow From The Extinguisher Through The Pipe Network To The Nozzles.

The Manual Activation Of The System Is Done Either By Remote Activation Mechanism Or By Pulling Down Of The Valve Rod.

SYSTEM COMPONENTS

- Ce Approved Local Application Fire Extinguisher (Net Weight 25kg) With Certified Valve Of Automatic & Manual Operation
- Heavy Duty Extinguisher Bracket
- Certified Detonator Used For The Automatic Activation Of The Extinguisher
- Stainless Steel Flexible Hose For Connecting The Extinguisher Valve Output To The Pipe Network
- Dry Powder Discharge Nozzles (1/2")
- 4 Zone Control Panel With Built-in Battery (Adjustable Detonator Activation Delay 0-80 Sec), With Extinguish Button And Extinguish Cancel Button

23

- Rate Of Rise Heat Detector Or Thermal Detector
- Smoke Detector
- Siren With Beacon For Alarm Warning

FIREFIGHTING - GASES - MEDICAL 631 1977

IG - 541 TOTAL FLOODING FIRE SUPPRESSION SYSTEM







FIRE SUPPRESSION SYSTEMS

IG-541 Is Used As Agent For Extinguishing Fires In Sensitive Areas e.g. Computer Rooms. Machinery Storage Facilities Sensitive Devices, Storage Facilities, etc.

IG-541 Consists Of Nitrogen (52%), Argon(40%) And Carbon Dioxide (8%). It Is Odourless, Colourless, Non - Corrosive And Because Of The Fact That Consists Of Gases That Exist In The Atmosphere, It Has No Effect On The Ozone Layer And Has Zero Effect On The Rising Of The Atmospheric Temperature.

IG-541 Extinguishes The Fire By Decreasing The Existing Oxygen Levels Of The Area Below
13% (Most Common Materials Stop Burning At This Level). In The Same Time, The Nitrogen
Of The Mixture Protects Any Human Being Trapped In The Area From A Low Oxygen Level.
IG-541 Is Stored In High Pressure Cylinders Of Various Capacities.

A COMMON SYSTEM CONSISTS OF:

Steel Pilot Cylinder 3Lt Capacity, Containing Nitrogen, with Manually, Fuse Activated Valve or Electrically Activated Valve Depending on the Requirements of the User (Pilot Cylinder is Used in Case of a Battery of more than two Cylinders). Cylinder is CE Certified According 97/23/EC by (TUV) (CE 0036).

High Pressure Collector, 300bar, Galvanized, its Diameter Varies from $1^{1}/4$ " to 3", with 3^{4} " inlet and Outlet Varying from $3^{4}/4$ " to 3". Non - Return Valves $3^{4}/4$ " - $3^{4}/4$ ".

Also Provided: Cylinder Bracket, High Pressure Flexible Hoses for Connecting the Cylinders to Each other and to the Collector, Various Types of Nozzles.

THE SYSTEM INCLUDES

Cylinders

Certified Carbon Dioxide Cylinders 16Lt (12Kg), 40Lt (30Kg), 50Lt

(35Kg), 67,5Lt (45Kg), 67.5Lt (50Kg), 80Lt (60Kg) with Valve for Manual or pneumatic activation, Disk Protection and Brackets

• Certified Cylinder «Pilot» 3Lt (2Kg) with Valve for Manual, Electrical or Pneumatic Activation and Bracket.

Components Collector

- Collector's Pipe Section From 1 1/4" to 3"
- Collector's Tee Cross Section From 1 1/4" to 3"
- Collector's Cap from 11/4" to 3"
- Collector's Reducing Coupling $\frac{1}{4}$ " = > $\frac{3}{4}$ ", 2" = > 1" 2 $\frac{1}{2}$ " = > 1 $\frac{1}{2}$ ", 3" = > 2"
- Non Return Valve ³/₄"

FIRE DETECTION

- 4 Zone Control Panel
- Optical Acoustic Siren
- Manual Activation Mechanisms
- Extinguish Cancel button
- Heat Detectors (Thermal or Rate of -Rise)
- Smoke Detectors
- Remote Electrical Extinguish Button

EPDM HOSE

- PDM hose
- EPDM High Pressure Flexible Hose for Connection of Pilot Cylinder with rest System Cylinders
- EPDM High Pressure Flexible Hose for Connection of the System cylinders
- EPDM High Pressure Flexible Hose for Connection of the System Cylinders with the collector
- EPDM High Pressure Flexible Hose for Connection of a Single Cylinder system with Nozzle's Network

OTHER ACCESSORIES

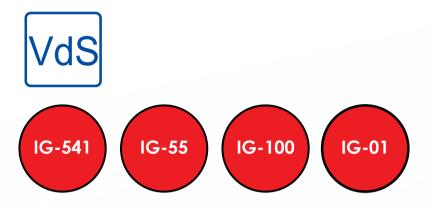
- Coupling (3/8" 3/8") for Connection of the EPDM Flexible Hoses of pneumatic activation in the Valves
- Blind Cap 3/8" for the Sealing the Last Slave Valve and the Pilot Cylinder
- Discharge Nozzles Total Flooding 1/2" to 1 1/2"
- Outlet Pressure Regulator (from 200bar to 60bar)

TECHNICAL SPECIFICATIONS

IG-541 Mixture Consists of Nitrogen (52%), Argon (40%) and Carbon Dioxide (8%).

INERT GAS TOTAL FLOODING FIRE SUPPRESSION SYSTEM

INERT GAS FIRE SUPPRESSION SYSTEMS M | N > A



MOBIAK introduces **Inert Gases (IG-541, IG-55, IG-100 or IG-01)** Total Flooding Fire Suppression System, Certified by VDS

GENERAL CHARACTERISTICS

- Filling Pressure Of Cylinder Is 200bar Or 300bar.
- Allows Long Pipes Run
- Post Discharge Visibility Is Clear, Facilitating Evacuation
- Inert And Non Toxic Gas, Which Makes It Suitable For Occupied Areas
- 100 % Environmentally Friendly Extinguishing Agent
- Easy And Cheap Refilling
- At Concentrations Between 40 % And 50 %, Effectively Inerts Mixtures of Propane And Methane In Air
- Vds Approved

APPLICATIONS

Particularly Suitable For Applications Requiring Electrical Non - Conductive Atmosphere And A Clean Gas That Leaves No Residue After Discharge. It Is Therefore Suitable For:

- Computer Rooms, Control Rooms
- Telephone Switchboard Equipment, Call Centers
- Electronic and Electrical Applications
- False Floors and Ceilings
- Archives, Museums, Libraries, etc.

VDS HYDRAULIC CALCULATIONS AVAILABLE UPON REQUEST, AFTER ORDER

VDS CERTIFICATION OF THE SYSTEM IN THE BRANDNAME OF MOBIAK

SYSTEM CERTIFIED BY VDS



FIREFIGHTING · GASES · MEDICAL (#1. 1977

CO₂ LOCAL APPLICATION SYSTEM



CERTIFICATES ISO 9809 - 1 EN 1964 - 1, π 99/36/EC CE CYLINDER 97/23/EC (TUV) COLLECTOR TESTED AT 300 BAR FROM MIRTEC SA CE VALVE (BV) 0062





FIRE SUPPRESSION SYSTEMS

Carbon Dioxide Constitutes A Colourless, Odorless And Inert Gas.

During Usage, No Damage Is Provoked (Contrary To Water Or Dry Powder, The Use Of Which Can Cause Important Damage To Equipment), It Is A Safe Agent For The Majority Of Materials, Non - Hazardous For Food, Non - Corrosive And Non - Conductive.

It Evaporates Completely In A Few Seconds After The Extinguishing Procedure And Leaves No Traces. Consequently, It Can Be Used With No Risk To Various Spaces Containing Electrical And Electronic Devices, Precious Artworks, Paintings Or Manuscripts, Flammable Liquid Warehouses, Electric Substations, Kilns And Ovens.

The Use Of $\rm CO_2$ Must Be Avoided In Spaces Where Humans Or Animals Are, Because Of Its Provoking Suffocating Conditions.

The Three - Dimension Use OfCO₂ Means That It Can Extinguish Fires In Vertical And Horizontal Direction. Its Fast Diffusion Constitutes The Key To A Successful Extinguishment, Since It Can Penetrate Through A Break On A Wall To All Secret And Remote Places Regardless Of The Obstacles That May Exist. Carbon Dioxide Constitutes A Stable Commercial Product With Many Other Applications And It Is Widely Used All Over The World.

CO₂Fire Suppression Systems Can Be Automatically Or Manually Activated, While The Activation Can Be Effected Mechanically, Pneumatically Or Electrically Or From Another Combination Of The Above Depending On Existing Conditions. CO₂ Is Stored In Normal Temperature Conditions In Steel Cylinders. Multiple Cylinder Batteries Can Be Applied To Specific Under Protection Areas.

A Common System Consists of:

Steel High Pressure Cylinders, Seamless And Of Various Capacities, Electrostatically Painted In Red Colour With Grey Neck. Cylinders Are Certified According 99/36/ec And En 1964-1 (π).

System Valves Pneumatically - Manually Or Electrically Activated With Pottential Use Of A Fuse. An Electrically Activated Sole Noid Valve Can Be Used, Depending On The Needs Of The User.

Steel Pilot Cylinder 3lt Capacity, Containing Nitrogen, With Manually Fuse Activated Valve Or Electrically Activated Valve Depending On The Requirements Of The User (Pilot Cylinder Is Used In Case Of A Battery Of More Than Two Cylinders). Cylinder Is Ce Certified According 97/23/ec By TUV (Ce0036).

High Pressure Collector, 300bar, Galvanized, Its Diameter Varies From 11/4" To 3", With 3/4" Inlet And Outlet Varying From 3/4" To 3". Non-return Valves 3/4" - 3/4".

Also Provided: Cylinder Bracket, High Pressure Flexible Hoses For Connecting The Cylinders To Each Other And To The Collector, Various Types Of Nozzles.

Cylinders

• Certified Carbon Dioxide Cylinders 16Lt (12Kg), 40Lt (30Kg), 50Lt (35Kg),

67.5Lt (45Kg) 67.5Lt (50Kg), 80Lt (60Kg) with Valve for Manual or

pneumatic activation, Disk Protection and Brackets.

• Certified Cylinder «Pilot» 3Lt (2Kg) with Valve for Manual Electrical or Pneumatic Activation and Bracket.

Collector Components

- Collector's Pipe Section from 1 1/4" to 3"
- Collector's Tee Cross Section from 1 1/4" to 3"
- Collector's Cap from 1¹/₄" to 3"
- Collector's Reducing Coupling $\frac{1}{4}" = > \frac{3}{4}"$, 2 "= > 1" 2 $\frac{1}{2}" = > 1\frac{1}{2}"$, 3 " = > 2".
- Non Return Valve 3/4"

EPDM Hose

- EPDM High Pressure Flexible Hose for Connection of Pilot Cylinder with rest System cylinders.
- EPDM High Pressure Flexible Hose for Connection of the System Cylinders.
- EPDM High Pressure Flexible Hose for Connection of the System Cylinders with the collector.
- EPDM High Pressure Flexible Hose for Connection of a Single Cylinder system with Nozzle's Network.

Other Accessories

- Coupling (3/8" 3/8") for Connection of the EPDM Flexible Hoses of Pneumatic Activation in the Valves
- Blind cap 3/8" for the sealing the last slave valve and the Pilot Cylinder
- Discharge Nozzles Local Application
- Discharge Nozzles Total Flooding

Fire Detection

- 4 Zone Control Panel
- Optical Acoustic Siren
 - Manual Activation Mechanisms
 - Extinguish Cancel Button
 - Heat Detectors (Thermal or Rate-of-Rise)
- Smoke Detectors
- Remote Electrical Extinguish Button

LOCAL APPLICATION SYSTEM FOR VEHICLE ENGINES

A Complete Detection & Suppression System Pre - Engineered For Vehicle Engines

FIRE SUPPRESSION SYSTEMS $ky \Delta \Diamond N^{\text{B}}$

SP CERTIFIED ACCORDING TO SPCR 183 / SP METHOD 4912 / UNECE R107







Dimensions: 38 x 19 x 19cm Weight (filled): ± 14 Kg



Dimensions: 60 X 19 X 19cm	Dimensions: 83 X 19 X 1
Weight (filled): ± 20 Kg	Weight (filled): ± 30 Kg

Material	Αλουμίνιο
Working Temperatures	-35°C ἑως +80°C
Extinguishing agent pressure	±35 bar
Internal cylinder pressure	200 bar
Norm	π / TPED

- Protects Passengers And Valuable Equipment
- Easy / Flexible Installation
- Quick & Effective Suppression
- No Electricity
- Highly Economical

Reduces Even The Most Critical Vehicle Engine Fire Risks:

- Oil Residue And Fuel Leaks
- Engine Overheating
- Short Circuits
- Passenger Injury
- Vehicle Damage & Repair

Kydon Vehicle Systems Use A Proprietary Continuous Linear Sensor Tube That Reliably Detects And Actuates Release Of The Extinguishing Agent Using Pneumatic Technology. It Is More Flexible, Space Efficient And Cost Effective Detection Method.

1. Quick & Easy Installation:

The Flexible Sensor Tubing Is Easily Installed Directly Above And Around The Engine -Closer To Where A Fire Could Start. When In Service, The Tubing Is Pressurized With Nitrogen To 16 Bar. The Dynamics Of Pressurization Make The Tubing More Reactive To Heat.

2. Early Fire Detection:

If A Fire Occurs, The Heat Of The Fire Causes The Pressurized Sensor Tube To Burst At The Hottest Spot (Approx. 170°c).

3. Instant Suppression:

The Sudden Tube Depressurization Actuates The Special Pressure Differential Valve And Instantly Floods The Entire Engine Compartment With Firedetec® TS55 Ea Extinguishing Agent. The Fire Is Quickly Suppressed Just Mom Ents After It Began Minimizing Damage And Downtime.

Everything you need together in one box	
27	

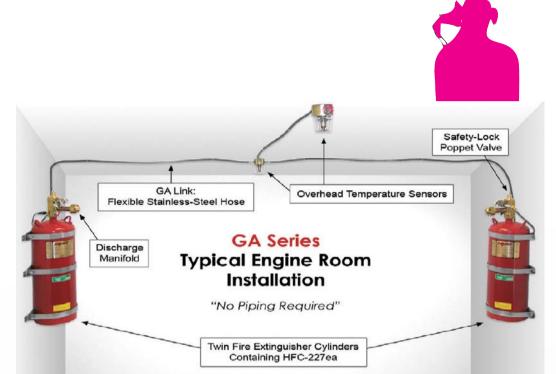




FIREFIGHTING - GASES - MEDICAL #11.197

HFC-227EA FIRE SUPPRESSION SYSTEMS FOR MARINE

CERTIFIED ACCORDING NFPA





FIRE SUPPRESSION SYSTEMS

TOTAL FLOODING CLEAN AGENT FIRE SUPPRESSION SYSTEM

U.S. Coast Guard Studies Show That Approximately 90% Of All Marine Fires Start In The Engine Compartment. The Same Studies Show That Only One In Ten Marine Fires Is Successfully Extinguished With Typical Dry-chemical Portable Fire Extinguishers Due To The Inherent Difficulties Of Fighting A Fire Manually. In Addition, Dry-chemical Fire Extinguishers Leave Behind Powder That Can Damage The Engine And Sensitive Electronic Equipment. HFC-227ea & FE-241 Systems Are A Safe And Effective Solution To Protect Ship's Machine Room. The System Is Activated Thermally (Without Manual Intervention) At 79°c, Relieving Clean Agent Gas Very Fast, Compared To The Reaction Time Of The Crew Of The Ship, Resulting Quicker Extinction And Smaller Losses (Agent Leaves No Residue Such As Powder).

CLEAN AGENTS: HFC-227EA VS. FE-241

A Choice Of Two Halon-replacement Clean Extinguishing Agents Are Available. FE-241® (Chlorotetrafluoroethane) Is Approved For Normally Unoccupied Spaces Such As Engine Rooms And Is Approved For Use In The United States HFC-227 ea Heptafluoropropane) Is Approved For Normally Occupied Spaces And Is Approved For Use In European Union Nations And Many Other Countries Due To Its Zero-ozone Depleting Properties. Both Fe-241® And HFC-227ea Are Considered Suitable Halon Replacement Agents Under The Epa's Snap Program.

ADVANTAGES OF THE SYSTEM

- Discharge Is Automatic At 79°c
- Total Flooding Of The Engine Compartment In Less Than 10 Seconds For Last Smothering Of The Fire
- Clean Agent Halon Substitute Gas (Fe-241® Or Hfc-227ea) Leaves No Harmful Residue To Clean Up
- Protection For Small Boats Up To Large Yachts With Engine Rooms From 0,7m³ To 85m³
- Many Marine Insurance Providers Offer A Discount Ot Boaters Who Install All Fixed Fire Extinguisher System
- Mobiak's Hfc-227 System Is Currently Manufactured In Refillable Cylinders
- Three Year Limited Warranty
- Suitable For Type A (Surface) B C E Firesides
- Listed In The Epa-snap List As Powder Aerosol A (Sfe)
- Designed To Meet Nfpa 2010 And Pren15276 Standards

FIRE SUPPRESSION SYSTEMS

HFC-227EA FIRE SUPPRESSION SYSTEMS FOR MARINE

Approvals & Certifications

MOBIAK HFC-227 System is Approved by Factory Mutual, U.S.C.G., and Bureau Veritas. Additionally, all Systems Containing HFC-227ea are Approved to EN ISO 9094-1 and EN ISO 9094-2 Standards by Bureau Veritas, Rina and Factory Mutual and are CE Certified.



Selecting Your System

Three MOBIAK model series are available:

MA2 Series

- Automatic Discharge With Optional Manual Discharge When Used With A Manual Discharge Cable
- Engine Rooms Up To 42m³
- Vertical Or Horizontal Mounting Allowed
- Fe-241® Or Hfc-227ea

CG2 Series

- Automatic Discharge Only
 Engine Rooms Up To 28m³
- Vertical Or Horizontal Mounting
- Allowed
- Fe-241® Or Hfc-227ea

GA Series

- Two Cylinder System For Larger Vessels With Engine Rooms From 42m³ To 85m³
- Cylinders Are Linked With Flexible, Braided Stainless Steel Hosing Allowing For A Near Simultaneous Discharge Of Both Cylinders
- Requires The Installation Of Manual Discharge
 Cable Mechanism
- Vertical Mounting Only
- Hfc-227ea Only





FIREFIGHTING - GASES - MEDICAL ESL 1977

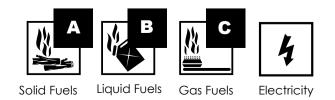
- Great Flexibility for Fire Classes A, B, C as well as in Protected Areas in the Presence of Electricity
- Long Product Life
- (5-10 years depending on the location and conditions of the site)
- Zero Maintenance Throughout Product Life
- No Cylinder is present the entire Product is Fitted inside the Sub -Protection Area
- Does not harm Under-Protected Equipment or Man during Extension
- \bullet Possibility of connection with Pressure Switch and Activation Alarm
- Use of Pressure Gauge Pressure Gauge
- Environmentally Friendly Extinguishing Materials (HFC-227ea and HFC-236fa)
- Automatic Activation Derived from Extinguishing Extinguisher Reason for Temperature Increase
- 100% Autonomous System Independent of Electricity
- Simple Installation No Training Required
- It can be stored in areas with a temperature range from -20 $^{\circ}$ C to + 80 $^{\circ}$ C with Using Pressure Switch
- \bullet Can be placed in areas with a temperature range from -40 ° C to + 90 ° C without Pressure Switch
- Activation Temperature 105 ° C \pm 3 ° C

Atomic Box

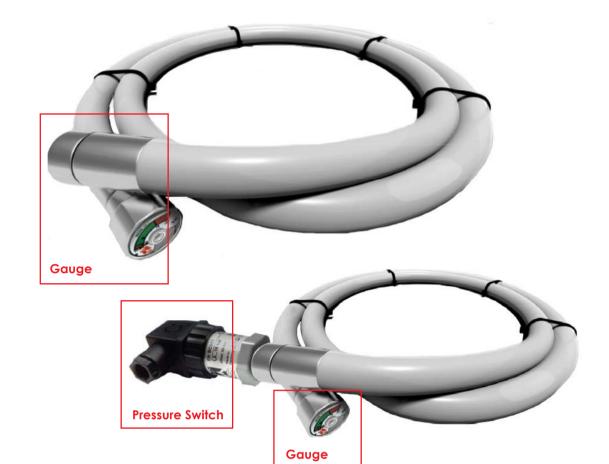


Siren for Electrical Panels





AUTOMATIC DESTRUCTION SYSTEM FOR ELECTRICAL TABLES & ENGINES $F|A|A \leq^{\circ}$ HFC-227ea



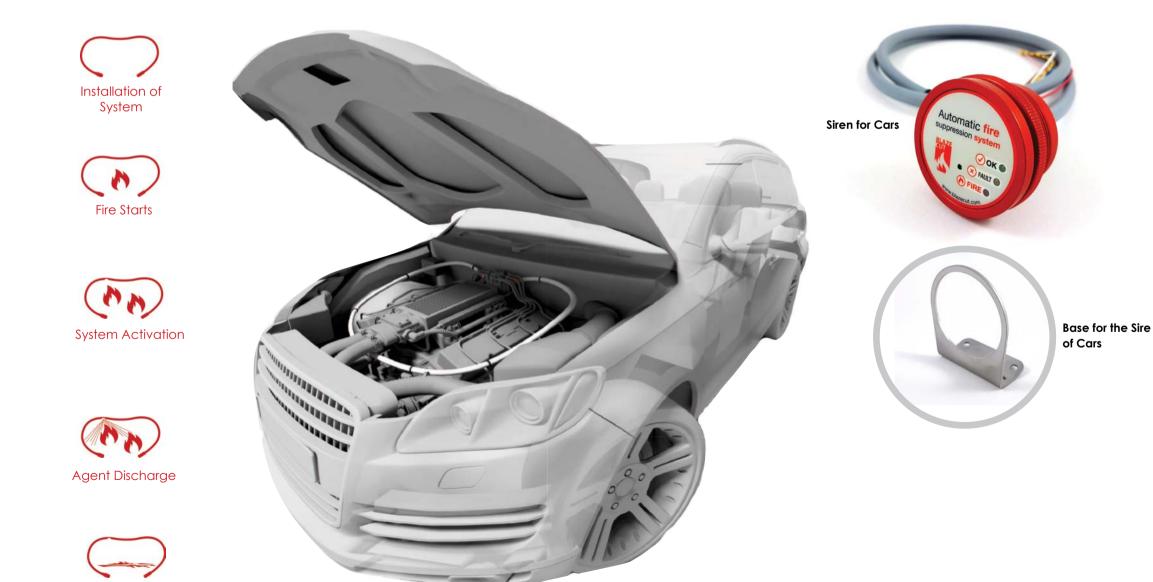
ERP	CODE	DESCRIPTION
0139167	MBK19-FDS-100FA	Automatic system Fidias HFC227EA 1m
0139168	MBK19-FDS-200FA	Automatic system Fidias HFC227EA 2m
0139169	MBK19-FDS-300FA	Automatic system Fidias HFC227EA 3m
0139170	MBK19-FDS-400FA	Automatic system Fidias HFC227EA 4m
0139171	MBK19-FDS-500FA	Automatic system Fidias HFC227EA 5m
0139172	MBK19-FDS-600FA	Automatic system Fidias HFC227EA 6m
0139173	MBK19-FDS-100FA-SWITCH	Automatic System Fidias HFC227EA 1m with Pressure Switch
0139174	MBK19-FDS-200FA-SWITCH	Automatic System Fidias HFC227EA 2m with Pressure Switch
0139175	MBK19-FDS-300FA-SWITCH	Automatic System Fidias HFC227EA 3m with Pressure Switch
0139176	MBK19-FDS-400FA-SWITCH	Automatic System Fidias HFC227EA 4m with Pressure Switch
0139177	MBK19-FDS-500FA-SWITCH	Automatic System Fidias HFC227EA 5m with Pressure Switch
0139178	MBK19-FDS-600FA-SWITCH	Automatic System Fidias HFC227EA 6m with Pressure Switch
0149049	MBK15-FDS-SIREN004	Σειρήνα για Σύστημα Φειδίας για Ηλεκτρικούς Πίνακες
149111	MBK15-FDS-SIREN200	New Siren for Vehicles
149112	MBK15-FDS-SIREN200-BRACK	Βάση για ΝΕΑ Σειρήνα για Σύστημα Φειδίας για Οχήματα

30

Code	Agent	Agent quantity (kg)	Length (cm)	Maximum volume protection for cabinets (m³)	Maximum volume protection for vehicles (m³)	Temperature ratio (°C)
MBK19 - FDS - 100FA	HFC-227ea	250 ± 5gr	113cm	0,35-0,57	0,27-0,44	-40°C to +90°C
MBK19 - FDS - 200FA	HFC-227ea	500 ± 5gr	215cm	0,71-1,15	0,54-0,88	-40°C to +90°C
MBK19 - FDS - 300FA	HFC-227ea	750 ± 10gr	319cm	1,06-1,72	0,81-1,31	-40°C to +90°C
MBK19 - FDS - 400FA	HFC-227ea	1000 ± 10gr	422cm	1,41-2,30	1,08-1,75	-40°C to +90°C
MBK19 - FDS - 500FA	HFC-227ea	1250 ± 10gr	526cm	1,77-2,87	1,34-2,19	-40°C to +90°C
MBK19 - FDS - 600FA	HFC-227ea	1500 ± 10gr	630cm	2,12-3,45	1,61-2,63	-40°C to +90°C







Agent Discharge

FIREFIGHTING - GASES - MEDICAL GR. 1977

AEROSOL GENERATORS CERTIFIED ACCORDING UL & EN ISO 9094-1/2

FIRE SUPPRESION SYSTEMS ECO GREEN

MOBIAK Aerosol Generators Are An Innovative Pre-products Designed For Extinguishing A Complete Bed Indoors. Extinguishing Material Is Friendly To The Environment And Is A Substitute For Gasth Halon As Well As Other Extinguishing Materials.

An Aerosol Generator System Is Intended For Extinguishing Fires Of Type A (Solid Surfaces), B. (Liquids) And C (Gases) And Prevents Re-ignition (Causes Hibernation) For E Type Fires Given Mind That The Latter Are Within A Certain Space. Mobiak Aerosol Generator Series Aims Primarily In The Protection Of Designated Areas; And Closed To Make It Possible Single Amount Of Aerosol Required For A Necessary Period Of Time For The Purpose Of Ensuring Effective Extinguishing.

The Material Contained In The Aerosol Generator Determines The Concentration Of Extinguishing Agent, H Which Is Required For Each Type Of Fire Given Volume That Must Be Protected.



Responsible Choice to the Environment! Product:

- Non Corrosive
- Non Toxic
- Not Harmful Or Irritating
- No Mutagenic Effects On Environment
- Or Human
- Does Not Harm Ozone (GWP)

The Aerosol Is Created Inside The Container

By Combustion Of The Material Contained Therein, Which Was Cooled It Comes From A Special Type Of Flame Fired By One Specially Designed Outlet And Absorbs Heat.

The Aerosol Is Generated Locally By Chemical Reaction That Takes Place In A Container That Does Not Is Pressurized To Produce Inert Particles Of A Dry Powder That Extinguishes The Fire Naturally But Also Chemicals.

When A Fire Is Detected, The Fire Sensors- Transmit An Electrical Signal To The Unit Of The Aerosol, Which In Turn Activates The Electric Igniter.

It Is Then Released Aerosol Extinguishing Material, Which (Completely) Floods The Space, Erasing It Just The Way The Fire.



Stand Alone Detector Activator of Generators

Main Characteristics

- Sites Where There Are No People
- Does Not Destroy Ozone
- Environmentally Friendly
- Non-toxic
- High Efficiency
- Non Pressure Vessels
- No Pipes Or Nozzles Required
- No Fire Alarm Connection Required
- Effective Even In Small Quantities
- Needs No Maintenance
- Convenient Safe Simple
- Economical
- Suitable For Type A (Surface) B C E Firesides
- Listed In The Epa-snap List As Powder Aerosol A (Sfe)
- Designed To Meet Nfpa 2010 And Pren15276 Standards

AEROSOL GENERATORS

CERTIFIED ACCORDING UL & EN ISO 9094-1/2

FIRE SUPPRESION SYSTEMS ECO GREEN





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EURO EURO	CB	Q.	
	R		K



Model	A50	A100	A200	A500	A1000	A5000
Quantity of extinguishing material [gr]	50	100	200	500	1000	5000
Evacuation Time [sec]	15	17	27	48	65	70
Dimensions [mm]						
Width	50	60	80	120	120	190
Height	50	60	80	120	120	445
Length	135	170	210	245	320	390
Total Weight [Kg]	0.6	1.2	2.7	11.6	12.5	46
Activation system		1.2 A				
Extinguishing Volumeç [m³]	0.5	1.0	2.0	5.0	10	50
Operating Conditions	- 40°C μέχρι +80°C (- 40°F μέχρι +176°F) 98% RH Max					
Storage Conditions	25°C ± 15°C					
Functionality (after installation)		12 Ye	ears			
How to Activate		Elec	tric			
Toxicity		Nor	ne			
Eco-friendly	No effect on ozone or greenhouse effect (No ODP & GWP)					
Hazard Class		UN1479 (Class 5.1			

CODE 0135265	CODE 0135268	CODE 0135	
MBK12 - A50	MBK12 - A500	MBK12	

DE 0135266

CODE 0135269 MBK12 - A1000 CODE 0135267 MBK12 - A200

CODE 0135293 MBK13 - A5000



FIRE SUPPRESSION SYSTEMS

WATER MIST SYSTEMS

Due To The Restrictions Imposed By The Montreal Protocol On The Protection Of The Ozone, The Need To Find New Substitutes For Halon 1301 Has Emerged. In Recent Years, The Use Of Pure Extinguishing Agents (Fe-13, Fm-200, Fe-25, Inergen, Argon, Etc.) Has Increased As They Do Not Affect Ozone, Effectively Reducing Compared To Halon And Also Leave No Residue After Use.

At The Same Time, Other Alternative Systems Have Emerged, With Lower Market Share But At A Very High Technological Level, Such As Water Mist. Everyone Knows About Water Swelling Capacity - As The Name Implies, In Water Mist Systems Water Is Divided Into Very Small Droplets Which Acquire Significant Extinguishing Capacity, Higher Compared To The Same Amount Of Water. If The System Is Powered On, Damage To The Equipment Is Almost Negligible As It Is Used Extensively Small Amounts Of Water.

Water Mist Fire Extinguishing is carried out by: a) Heat / Flame Absorption,

- b) Oxygen Replacement; and
- c) Reduction of Radiation

Fire / Flame Absorption

By Reducing The Size Of The Droplets, The Total Quenching Area Is Increased And Thus Increasing The Rate Of Heat Absorption. Energy Absorbs-By Evaporation (From Liquid To Steam). With This Phenomenon, During The In The Case Of Flammable Vapor The Temperature Drops Below The Minimum Required Value Which Retains The Combustion.

Replacement of Oxygen

Water Droplets, When Converted From Liquid Form To Steam, Increase It Volume 1800 Times (At 100 °C And 1 Bar). If The Conversion From Liquid To Steam Occurs It Vaporises Fairly Quickly Then The Water Vapor Replaces The Air Around Them Flames. If The Amount Of Oxygen Drops Below Specific Levels, Extinguishing Fire Is 'choking'.

Reduction of Radiation

It Restricts The Spread Of Fire To Other Areas As The Thermal Radiation In The Danger Area Is Reduced, Preventing The Fire From Being Transported To Nearby Surfaces.

This Mechanism Is Not An Extinguisher In Itself, But When Combined With The Mechanisms Above It Is Extremely Important In The Evolution Of Fire.

The Use Of Water Mist Should Cover One Of The Following Purposes

- Fire Control: Limiting The Increase And Spread Of Fire. The Expansion Time Must Be Long Enough To Allow Manual Activation To Control The Fire.
- Fire Suppression: Substantial And Rapid Reduction In Fire, Heat Release And Vapor Factors During Expansion.
- Fire Extinguisher: After System Expansion (Usually 10 Minutes), The System Must Be Able To Eliminate The Possibility Of Re Ignition Until The Combustion Materials Have Completely Disappeared.

Water Mist Systems Operate At Operating Pressures From 15 To 200 Bar, Converting The Water Into Small Droplets (From 25 To 80 * 10 M) That Expel The Fire At A Very High Speed. Two Types Of Systems Are Used Depending On The Application And The Amount Of Water Needed To Combat The Risk.

It Is Possible From MOBIAK To Fully Study Water Mist Systems Depending On The Application (The Protected Area).



Enviromental friendly

WATER MIST FIRE SUPPRESSION SYSTEM VDS CERTIFIED

FIRE SUPPRESSION SYSTEMS



Cylinder Systems (UAC)

These Systems Are Used When Required Less Than 850 Liters Of Water. They Are Made From Manifold Water Cylinders, Manufactured According To The Standard, With Different Sizes, With Internal Anticorrosive Coating And At 200bar (Driving Agent). There Is A Choice Of Manual, Pneumatic, Electric Or With Remote Manual Activation.

APPLICATIONS

Water Mist System Can Be Used Effectively In Applications Of Local And Total Flooding In Following Areas:

- Ship
- Engine and Generators
- Escalators
- Trains and Railway Stations

Systems with Pumping Installations (UAP)

These Systems Are Combined With Tanks That Have The Capacity To Store Water Up To 3000 Liters And Therefore Increase The Amount Of Water Required. Develops Pumping Stations With Caudal By 32lt/min To 220lt/min With Their Respective Electrical Control Panels, Maneuver And Signaling.

Depending On The Hazard To Protect, Different Types Of Nozzles Are Used Made Of Stainless Steel With Discharged Flows From 1,2lt/min To 48lt/min. There Are Open Nozzles Which Discharge Directly On The Hazard After Activation Of The System (Manual Or Electrical Through The Control Panel) And Close Nozzles, Sprinkler Type, Which Only Discharge After Breaking The Incorporated Thermal Detection Bulb For A Certain Temperature.

GENERAL CHARACTERISTICS

- Suitable For Occupied Areas And Equipments.
- Inexpensive Refilling
- Drastic Temperature Reduction After Activation
- Eco Friendly Agent, Without Any Impact On The Environment
- Electrically Non Conductive Because Of Small Drops
- Restricts Further Damage Due To The Presence Of Water











FIRE SUPPRESSION SYSTEMS

AUTOMATIC FIRE SUPPRESSION SYSTEM FOR BURNER ROOMS

SYSTEM CERTIFIED

Boiler Central Heating Installation Is The Area At Which Is Located One Or More Boilers Producing Hot Water Or Air Or Steam For Heating A Building Or Group Of Buildings.

The Boiler Uses Large Quantities Of Flammable Fuels Such As Oil Or Gas. It Is Typical Phenomenon These Days, Fires To Originate From Boiler Rooms Of Apartment Buildings Or Single Buildings.





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The Burner And Especially The Exhaust Pipe, When Is Not Maintained Properly And At Predetermined Intervals Is Leaving Combustion Residues Which Are Particularly Dangerous To Ignition And / Or Explosion.

For Continuous Protection And Fire Suppression In Such Places, Mobiak Proposes The Automatic Dry Powder Ceiling Extinguisher System.

The System Offers Local Fire Protection In The Area Of The Burner And The Extinguisher Should Be Mounted At A Fixed Point In Height 2-2.5 M Above The Burner. The Fire Extinguisher Uses 12 Kg Of Dry Powder Abc40% At 18bar (Nitrogen As Propellant / Gas) And Automatic Sprinkler Ce Certified Which Is Activated When The Temperature Reaches 68°c.

When The Sprinkler Bulb Breaks The Agent Is Discharged Over Protected Area.

Meanwhile Pressure Switch (Activation At 10bar) Is Connected To The Sprinkler Of The Extinguisher. When The Pressure Drops At 10bar, The Switch Is Activated And Transfers Signal, With An Appropriate Electrical Connection, So That To Shut Off The Burner. In Addition, The Switch Can Be Used To Trigger A Siren Offering A Valuable Warning In Case Of Fire.





Value in safety... invest in Quality!



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MOBIAK



