Dynameco®

Aerosol Fire Extinguishing Generators and Systems

Dynameco®
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„Dynameco aerosol fire extinguishing generators, the innovative, environment-friendly, non-toxic and economical fire extinguishant technology for the requirements of our future.“

The Dynameco fire suppression agent technology is a „green“ suppression agent technology, which means it is environmentally sound and environmentally safe. (Ozone Depletion Potential = 0, Global Warming Potential =0, negligible residual amounts in the atmosphere). The Dynameco fire suppression agent technology is listed as official „HALON substitute“ by the United States Environmental Protection Agency (EPA). The fire suppression agent does not have any detrimental effect on life on our planet; it has the status „non-toxic“.

APPLICATIONS

With over 30,000 different Dynameco installations in different fields and countries, eg Germany, Italy, Spain, Austria, Greece, Scandinavia, India, Iran, Malaysia, Venezuela, Brazil and Canada, the Dynameco fire suppression agent technology is leading worldwide. Among Dynameco customers are, for example, ABB, BP, Demag, Iberia, Mercedes Benz, Nokia, Nissan, Toyota, Vestas, Steigenberger Hotels, Maritim Hotels, Magneti Marelli, etc.

ECONOMY

The large German insurance companies grant discount insurance rates because the insurance companies have rated Dynameco aerosol fire extinguishing generators as particularly effective, economic and special fire prevention media.

Technical Data Sheet

	Dynameco 200-EO2	Dynameco 300-EO2	Dynameco 2000-EO2
TYPE SPECIFICATIONS			
Dimensions (H/D)	118 mm/ 82 mm	198 mm/ 82 mm	250 mm/ 200 mm
Total weight	0,905 kg	1,280 kg	7,530 kg
Duration of Aerosol generation	- 5 s	- 8 s	- 15 s
Volume to be protected	2 cbm	3 cbm	20 cbm
SYSTEM SPECIFIC DATA			
Electrical ignition	1.5 A; 6 ms	1.5 A; 6 ms	1.5 A; 6 ms
Function temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Certification BAM-PT1-0567	+	+	+
Approval mark: PL-4/97/ Aerosol extinguishing Agent	+	+	+
Fire class	B (limited) / C to DIN EN2	B (limited) / C to DIN EN2	B (limited) / C to DIN EN2
EMV- approval e12 02 0017	+	+	+
EU-conformity-declaration: M/EMV-99/325, 2000-02-04	+	+	+
SERVICE SPECIFIC DATA			
Test current	5 mA max.	5 mA max.	5 mA max.

References

ABB Motors
ABOWind
AEROMEXICO
ALPHA Armouring
ALPHA LAVAL
AUTO-RIBEIRO
BP British Petrolium
Central Bank of Santander
Continental Hotels
DELOITE & TOUCH
DEMAG Mobile Cranes
DISNEY CHANNEL
Fahrzeugbau Stadthagen
Hydrocontrol GmbH
IBERIA
John Deere Werke
Kirow Leipzig GmbH
LAFARGE
MAGNETI MARELLI
MAK System GmbH
Maritim Hotels
MERCEDES BENZ
Ministry of Defence of Spain
Ministry of Justice of Spain
MONTBLANC
NISSAN Motors
NOKIA Telecommunications
NOVARTIS (Sandoz-Ciba)
PETRONAS
RENAULT
REPSOL-BUTANO
Rheinmetall Landsysteme
SANTANDER TV
STEIGENBERGER Hotels
TOYOTA
TRASCO Fahrzeugbau
University of Barcelona
VESTAS Deutschland GmbH
REpower Systems AG

Dynameco®

Aerosol Fire Extinguishing Generators and Systems

The innovative and environment-friendly fire suppression technology.

Dynameco® Technology

„Dynameco“ aerosol fire extinguishing generators suppress fires in the phase leading up to the fires -in seconds- so that consequential damages of buildings, machines and facilities are avoided.

BENEFITS

The aerosol fire suppression agent technology developed by Dynamit Nobel is one of the leading technologies worldwide. The hi-tech equipment of modern industrial buildings, machines, facilities and installations requires compact, fast and reliable fire protection systems. People and assets must be protected effectively, downtimes must be prevented. The first seconds between the breaking out of the fire and fire fighting are decisive for the successful suppression of fires.

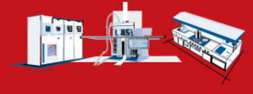
DEVELOPMENT

Alfred Nobel

Dynamit Nobel's decades of experience and development have contributed to our Dynameco aerosol fire extinguishing generators having become a part of the complex fire protection industry worldwide. Manufactured i.a.w. the regulations and standards of DIN EN ISO 9001/2000, ISO 14001, VDE, IQNet, TÜV and BAM, our Dynameco aerosol fire extinguishing generators meet the highest requirements in fire protection. The Dynameco fire suppression agent technology is protected worldwide by patents.

FIELDS OF APPLICATION

The Dynameco aerosol fire extinguishing generators group of products is designed for the suppression of fires in objects and in rooms for a wide range of fields of application. Major fields of application are electrotechnical facilities and equipment, kitchens, machines, ships and vehicles.



The high effectivity of the fire suppression agent - a minimum of fire suppression agent generates a high fire suppression power - lets fires be extinguished within a few seconds. The Dynameco aerosol fire extinguishing generators are especially suitable for fighting fires in the phase leading up to the fire.

Dynameco® Suppression Principle

The Dynameco aerosol fire extinguishing generator contains a pyrotechnical extinguishing charge. In case of a fire, this extinguishing charge is ignited electrically, thermally or manually. The chemical reaction generates potassium carbonate, which discharges as solid aerosol. The average particle size of the aerosol is between 0.5 and 2.5 µm. A physical reaction of the aerosol with the flame draws energy from the fire. The chain reaction is also interrupted through the binding of free radicals. During this process the environment is not deprived of oxygen.

Dynameco® Applications

Depending on the risk analysis, Dynameco aerosol fire extinguishing generators are used in very different fields for extinguishing fires in objects and/or rooms. The exact conception of the fire extinguishing system is based on the knowledge of the site and the risk sources.

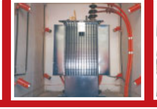
2 Methods of Fire Suppression

Total-Flooding — *Dynameco 2000 EO2*

Object Suppression — *Dynameco 200/300-EO2*

Engine Room Yacht

Hydraulic Station



Transformer

Compressor Unit

Dynameco® Product Group/ DCU

The Dynameco product group currently includes three different aerosol fire extinguishing generators designed for different volumes to be protected. Depending on the application, all extinguishers can be used for extinguishing fires in objects and/or in rooms. The Dynameco product group is approved for fire protection classes B (limited) and C.

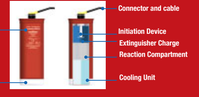
BASIC DATA PRODUCT GROUP

Dynameco: Comparison mechanical installation volume

***Dynameco* 200-E02**
Protected volume: 2 m³
Weight: 0.9 kg
Temperature range: -40 to +85°C
Dimension: H = 113 mm, D = 82 mm

***Dynameco* 300-E02**
Protected volume: 3 m³
Weight: 1.28 kg
Temperature range: -40 to +85°C
Dimension: H = 193 mm, D = 82 mm

***Dynameco* 300-E02 Section Model**



***Dynameco* 2000-E02**
Protected volume: 20 m³
Weight: 7.53 Kg
Temperature range: -40 to +85°C
Dimension: H = 250 mm, D = 200 mm

Dynameco® Control Unit (DCU)

Fire Detection — UV, Temp., Smoke

Fire Alarm Control Panal — BMZ

Release — DCU, Distributer Box

With the control unit developed especially for Dynameco aerosol fire extinguishing generators it is possible to connect 12 aerosol fire extinguishing generators or 12 junction boxes with 9 aerosol fire extinguishing generators directly. A total of 108 aerosol fire extinguishing generators maximum can be connected to a Dynameco Control Unit (DCU). The DCU controls, monitors - for cable breakage - and activates the aerosol fire extinguishing generators. The DCU can be connected to any central alarm panel. Alternatively, the control unit can also be triggered with the manual release by means of the Dynameco Operating Device (DOD). The DCU allows the triggering of all aerosol fire extinguishing generators with 1.5 A. It is designed for a 12V/24V power supply.

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Dynameco® Features

- Simple system / can be installed by any skilled electrician
- Economical in comparison to conventional systems
- Easy integration into existing fire detection, activation or alarm systems
- Easy and fast installation in buildings, rooms, machines, facilities and equipment
- Easy removal and installation at other sites (relocation)
- Easy expansion of the system
- Minimal downtimes/time of non-use of machines, facilities and equipment or production
- No damage to or destruction of machines, facilities and equipment by the fire extinguishing agent
- Very fast fire suppression system (extinguishes in seconds)
- Direct and fast suppression of the source of fire
- Suppression takes place in the phase leading up to the fire, minimal consequential damages
- Official halon substitute extinguishing media i.a.w. US EPA
- Non-toxic and neutral to the environment
- O.D.P. (Ozone Depletion Potential) = 0
- G.W.P. (Global Warming Potential) = 0
- Extinguisher replacement by the customer/operator
- Easy replacement of the generator by the customer's/operator's skilled personnel
- High reliability and availability
- Extinguishing agent nearly without residues and chemically neutral
- Non-toxic extinguishing agent
- No conductivity resulting from the use of the extinguishing agent
- Extinguishing agent is only generated when required
- Harmless for the environment
- No generator maintenance/inspection intervals (as the generator is not pressurised)
- Minimal space requirement for mechanical installation
- Low weight in relation to the suppression power

Dynameco® Applications

SWITCHING CABINETS/ ELECTRICAL INSTALLATIONS

According to statistics, 32 % of all fires originate in electrical installations. The electrical switching cabinets and switching installations with their active and passive components pose a substantial risk potential. From the switching cabinets, a fire can spread into the building due to fire loads of the cables and lines. With Dynameco aerosol fire extinguishing Generators, switching cabinets or distributing centres are flooded inside since the fires, as a rule, start inside. The aerosol fire extinguishing generators can be installed either inside or outside, in the latter case with a blowing device which blows the aerosol into the switching cabinet through a duct. The switching cabinet is extinguished within a few seconds. Dynameco is a highly effective and economical fire suppression agent for switching cabinets and switching installations.

WIND POWER PLANTS

Recently, strikes of lightning, oil and cable fires have caused many fires in wind power plants. As fires in the pods of wind power plants can not be extinguished by the responsible fire brigade, as a rule, these plants burn down completely. The damage for operators and insurance is enormous. Dynameco aerosol fire extinguishing generators are used in the three risk areas of wind power plants. In the area of the pods, the transformer room and inside the closed switching cabinets. Low weight and small installation dimensions as well as no unnecessary pressure vessels and pipings are the main fire protection requirements in wind power plants, which Dynameco aerosol fire extinguishing generators fulfil perfectly.

KITCHENS

The risk of fires in kitchens, with deep fat fryers and industrial deep fryers is high. Easily ignitable hot fats and oils can quickly lead to fires putting personnel and equipment at risk. In the past, fires not extinguished in time have resulted in notable damage and impairments. Many domestic fires can be traced to incipient fires in the kitchen. The Dynameco aerosol fire extinguishing generators installed in the risk areas extinguish the fire within seconds after triggering. The residues can be removed fast and problemfree with commercial cleaners and water.

APPLICATION AREAS

Data Processing/ Communications

- PC's
- Hosting Center
- Server Center
- Radio transmitters/stations
- TV transmitters/stations
- Telecommunications
- Computer suites

Transport

- Lorries
- Cars
- Buses
- Railways
- Ships
- Aircraft

Machines
Storage Facilities

- Stockrooms
- Archives
- Warehouses
- Libraries

Electrotechnology

- Transformers/ transformer stations
- Generators/stations
- Switching cabinets
- Measuring stations
- Distributing centres
- Control stations
- Substations

Power Generation

- Wind power plants
- Uninterruptible power supply systems
- Turbines
- Decentralized power generating systems

Kitchens