

# Instructions for use of Dynameco-E02 electrically actuated aerosol fire extinguishing generators



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**Dynameco**<sup>®</sup>

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Dear customer,

With your purchase of a Dynameco-E02 aerosol fire extinguishing generator you have acquired a product of quality.

The Dynameco-E02 product range includes the following fire extinguishing generator types:

- Dynameco 200-E02
- Dynameco 300-E02
- Dynameco 2000-E02

Once you have opened the packaging please note the following:



- Read these instructions carefully in full before installing the first aerosol fire extinguishing generator.
- Check each aerosol fire extinguishing generator for external damage once removed from the packaging.

Each package unit contains the relevant number of connectors and cables together with the aerosol fire extinguishing generators. For each fire extinguishing generator there is also a check disk for recording the fitting date.

## Instructions for use

1. How the Dynameco aerosol fire extinguishing generators work
2. Areas of application areas and special points
3. Storage
4. Fitting and installation
5. Removal
6. Regular inspection of aerosol fire extinguishing generators in the Dynameco-E02 series
7. Prevention of misuse
8. Age restriction
9. Disposal

## 1. How the Dynameco aerosol fire extinguishing generators work

The action of this fire extinguishing system is based on the generation of an aerosol composed of finely diffused (highly dispersed) particles of the extinguishing agent potassium carbonate ( $K_2CO_3$ ), which is created by burning a pyrotechnic mixture.

This aerosol fire extinguishing agent is suitable for extinguishing the flames.

The fire extinguishing process is based on the bonding of so-called intermediate reaction products (free radicals) and combustion energy on the surface of the aerosol cloud released. The oxygen in the air remains unaffected during this process.

## 2. Areas of application areas and special points

The range of Dynameco-E02 aerosol fire extinguishing generators can only be used for fire extinguishing in individual objects or specific volumes.

The following points should be observed depending which of these two purposes applies:

- a) When dealing with an object the discharge opening (see parts drawing no 5) of the aerosol fire extinguishing generator in use should be aimed directly at the area at risk.
- b) For area saturation the concentration of the extinguishing agent is important. The volume protected by the fire extinguishing generator type in use can be found in the specific data sheets.

The use of aerosol fire extinguishing generators with electric actuation is only permitted in conjunction with an authorized fire alarm system.



### Important:

**Given that the fire extinguishing agent interrupts the chemical reaction in the flames, but has no cooling effect, the fire must be fought in its initial stages. This prevents the occurrence of a considerable degree of glowing and hot surfaces which could lead to re-ignition if the concentration of extinguishing agent is reduced. With this in mind it should be ensured that the concentration of extinguishing agent is maintained as long as possible in the event of a fire.**

Once the aerosol fire extinguishing generators are actuated, visibility can be reduced considerably. The consequences can be mitigated by technical measures.



### Note:

- The aerosol spray generated for extinguishing the fire is hot. People and objects must maintain a minimum distance of 1.5m.
- **Do not touch the aerosol fire extinguishing generator after use; it could burn!**



### Important:

**Sections of these instructions marked with warning symbols are important for your safety and the safe operation of the aerosol fire extinguishing generator and should therefore be carefully observed.**

### 3. Storage

The aerosol fire extinguishing generators are stored in the packaging in which they are supplied. They must be stored in a cool dry place.

The storage temperature must not go above or below the manufacturer's guaranteed operating range of **-40°C to +85°C**.

### 4. Fitting and installation



#### Important:

**After fighting the fire all objects and surfaces affected by the fire and extinguishing process must be cleaned of residues. Please note the cleaning recommendation.**

The following points should be observed during assembly:



#### Important:

- The temperature of the location in which the aerosol fire extinguishing generator is fitted must stay within the guaranteed operating temperature of **-40°C to +85°C**.
- Fitting and installation may only be carried out by trained specialist personnel.

- a) The aerosol fire extinguishing generator should be located such that people and heat-sensitive objects are not directly exposed to the aerosol spray. A minimum distance of 1.5m must be maintained.
- b) The aerosol fire extinguishing generator must be secured in the bracket provided. The way in which it is secured depends on the design of the bracket.
- c) After securing the aerosol fire extinguishing generator in the bracket, it should be ensured that it sits correctly and firmly in place.



#### Important:

**When fitting the bracket, the direction in which the appliance operates must be considered.**



#### Note:

**The connection cable may not be connected to the aerosol fire extinguishing generator until fitting is complete. When doing so, care should be taken to ensure that the connection cable is not live.**

- d) Plug in the connector (see parts drawing no 3) to fasten the cable and press until it can be felt locking into place.
- e) If it is necessary to use a screened connection cable, then the cable screening must be connected with the earth connection located on the housing cover by the manufacturer (see parts drawing no 4).

- f) After connecting the cable the connection must be secured using the securing element provided (see parts drawing no 2).



- g) The connection should be checked again after completing the fitting procedures to ensure a secure fit.
- h) After installing the aerosol fire extinguishing generator the date of fitting should be marked on the generator housing using the check disks provided.



#### Note:

**After extinguishing a fire the housing of the aerosol fire extinguishing generator will be very hot presenting risk of burns! If the unit has to be removed immediately after extinguishing a fire, appropriate tools and protective equipment should be used.**

### 5. Removal



#### Note:

**Before removal of aerosol fire extinguishing generators which have not been activated the cable connection must be released.**

To remove:

- a) Pull out the connector after removing the securing element (see parts drawing no 2) by lifting the extension on the cable side.
- b) After releasing the lock take the aerosol fire extinguishing generator out of the bracket.

## 6. Regular inspection of aerosol fire extinguishing generators in the Dynameco-E02 series

Aerosol fire extinguishing generators in the Dynameco-E02 series should be checked regularly depending on environmental conditions at their location to ensure there is no external damage and the actuator is working.

Frequency of inspection will depend on the installation conditions and any resulting stress factors. If the aerosol fire extinguishing generators to be inspected are subject to particular stresses such as vibrations, major temperature fluctuations or pollution, then weekly inspection is recommended. In normal situations an inspection should be carried out every three months.

The following points are particularly important when inspecting an aerosol fire extinguishing generator in the Dynameco E02 series:

- The housing of the aerosol fire extinguishing generator should not have any dents or similar damage. If such damage exists then the fire extinguishing generator should be replaced.
- The metal foil sealing the aerosol fire extinguishing generator on the extinguishing agent discharge side (see parts drawing no 5) must be undamaged and should not be excessively soiled by paint or similar substances which could prevent the metal foil bursting open in the event of a fire. In this case the aerosol fire extinguishing generator should be replaced or any foreign substance should be cleaned off the foil.



### Important:

The resistance of the ignition element cannot be measured directly at the mounting connector (see parts drawing no 6) of the aerosol fire extinguishing generator as the terminals of the connection without a connector plugged in are protected by a shorting bar.

- The connection between the connection cable and the aerosol fire extinguishing generator must be secure and must have a safety element (see parts drawing no 4). Absent safety elements must be replaced.
- The aerosol fire extinguishing generator must sit securely in the bracket provided.



### Important:

The metal foil must not be damaged during cleaning.

- The electrical supply to the generator should be checked to ensure it has been properly laid.
- The efficiency of the electric actuator should be checked using a resistance meter.



### Note:

The test current should not exceed 5mA. Otherwise there is a danger of unintentional activation.

To check the ignition element, proceed as follows:

- Remove connector from aerosol fire extinguishing generator.
- Connect a cable with free ends.
- Connect the terminals of the resistance meter to both ends of the connection cable.

The ignition element must have the following resistance:  $0,9 \pm 0,1 \Omega$



### Important:

The maximum period of use of 5 years must not be exceeded.

## 7. Prevention of misuse



### Important:

- Aerosol fire extinguishing generators may only be stored in authorized packaging.
- They may only be taken out to be fitted.
- The storage and operating conditions specified in these instructions must be observed.
- Only externally undamaged aerosol fire extinguishing generators may be fitted. Damaged aerosol fire extinguishing generators must be returned to the manufacturer.
- Aerosol fire extinguishing generators may not be opened under any circumstances. Any attempt to open them mechanically, the fitting of external objects and subjection to abnormal mechanical stresses are not permitted.
- Aerosol fire extinguishing generators must be kept away from constant heat sources of any kind (open fire, heater fan, radiators etc). The storage and operating temperatures defined above must be observed.
- Requirements on the safety data sheet, the technical data sheets and the cleaning recommendation must be observed.

## 8. Age restriction



### Important:

Dynameco extinguishing generators may only be handled by trained persons of more than 18 years of age. (In countries outside the European-Union differing legal provisions are possible.)

## 9. Disposal

Once activated, Dynameco aerosol extinguishing generators can be disposed of with the household waste.

### Caution:

**Under no circumstances should aerosol extinguishing generators be disposed of with household waste without previous activation.**

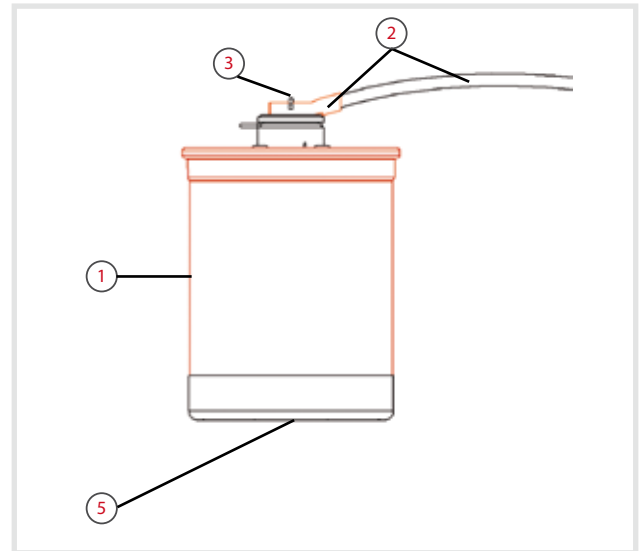
Extinguishing generators in working order which need to be disposed of due to age or damage must be returned to the manufacturer.

In individual cases it may be appropriate for customers to dispose of extinguishing generators. If so a controlled activation must be induced observing the following points:

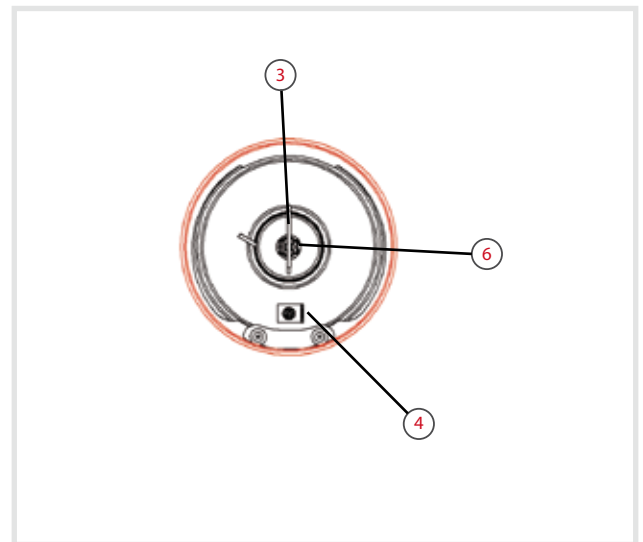
- Only undamaged extinguishing generators may be disposed of by the customer.
- All requirements described in these instructions for safe installation and handling must be observed.
- The extinguishing generators must be adequately secured when activated.
- The aerosol cloud produced upon activation must not have any detrimental effect on the environment.

### Caution:

**Damaged aerosol extinguishing generators should always be returned to the manufacturer. They should not be disposed of by the customer.**



Drawing 1



Drawing 2

- ① Generator housing
- ② Connector and cable
- ③ Safety element
- ④ Earth connection
- ⑤ Fire extinguishing agent discharge side
- ⑥ Mounting connector with shorting bar