

Operating Instructions

for aerosol extinguishing generators of the 200/300/2000 E03 series



Dynamit Nobel Defence

Dear customer,

You have bought a quality product in the form of an electrically activating aerosol extinguishing generator of the Dynameco E03 series.

The Dynameco E03 product range comprises the following extinguishing generator types:

- Dynameco 200-E03 (for a 2 m³ room volume)
- Dynameco 300-E03 (for a 3 m³ room volume)
- Dynameco 2000-E03 (for a 20 m³ room volume)



Do note the following points after opening the packaging:

- Fully and attentively read through these instructions for use before installing the first aerosol extinguishing generator.
- Check each aerosol extinguishing generator for any external damage when removing from the packaging.

Along with the aerosol extinguishing generators the right number of connectors including cables is to be ordered for each package unit. Included for each extinguishing generator is an inspection sticker to record the assembly date.

Instructions for use

1. Mode of operation of aerosol extinguishing generators of the Dynameco series
2. Areas of application and particular features
3. Storage
4. Assembly and installation
5. Dismantling
6. Periodic monitoring
7. Information on excluding any misuse



Important:

The sections of these instructions for use marked with warning symbols affect your safety and the operational reliability of the aerosol extinguishing generator. That is why special attention is to be given to these sections.

1. Mode of operation of aerosol extinguishing generators of the Dynameco series

The function of this fire extinguishing system is based on generation of an aerosol consisting of extremely finely distributed (highly dispersed) particles of the potassium carbonate extinguishing agent (K_2CO_3) created from the burn-off of a pyrotechnic composition.

This aerosol extinguishing agent is for extinguishing the flames of a fire.

The extinguishing process is based on binding "intermediate reaction products" (free radicals) and combustion energy on the surface of the liberated aerosol clouds. This operation does not affect the aerial oxygen.

2. Areas of application and particular features

Aerosol extinguishing generators of the Dynameco E03 series are used to extinguish single objects or certain room volumes.

In line with these two possible kinds of use, the following must be observed when planning the extinguishing system:

- a) In the case of extinguishing an object, the escape flow port (see Parts Drawing No. 5) of the respective aerosol extinguishing generator is pointed directly onto the area at risk from fire.
- b) Pay attention to the required extinguishing agent concentration in the event of area flooding. The spatial volume shielded by the respective extinguishing generator type can be taken from the specific data sheets.

Aerosol extinguishing generators with electrical activation may only be used together with an approved fire alarm system.



Important:

The fire must be fought when it arises since the extinguishing agent with no cooling effect interrupts the chemical reaction in the flames of the fire. This is to stop glow and hot surfaces developing on a larger scale which - given a decreasing extinguishing agent concentration - could result in re-ignition. It should also be noted here that in the event of a blaze the extinguishing agent continues to remain concentrated for a long time. Therefore to prevent any re-ignition the extinguishing zone/area is only to be entered after 15-30 minutes

Visibility may be considerably impaired once aerosol extinguishing generators are activated. Technical steps can be taken to reduce the effects, if necessary.



Warning:

The aerosol flow generated during the extinguishing process is hot. Persons are to be at least **1.5 m** away from the discharge side.

Do not touch the aerosol extinguishing generator after deployment; scolding risk! An adequate cooling time of at least 30 minutes is to be kept.

**Important:**

All objects and surfaces affected by fighting the fire and its extinguishing are to be cleaned of residues. Please consult the cleaning instruction on this.

3. Storage

Aerosol extinguishing generators are stored in their delivery packaging. Cool, dry storage is to be provided.

On no account is the storage temperature to exceed or fall below the factory-guaranteed operating range of **-40 °C to +85 °C**.

4. Assembly and installation**Important:**

- The temperature at the installation location of the aerosol extinguishing generator must be within the guaranteed operating temperature of **-40 °C to +85 °C**.
- Only trained service personnel are to undertake assembly and installation.

The following points must be observed when assembling:

- Choose where the aerosol extinguishing generator is to be attached so that persons and heat-sensitive objects are not directly exposed to the aerosol flow. Persons are to be at least **1.5 m** away from the discharge side.
- The aerosol extinguishing generator is to be firmly fitted into the envisaged mounting bracket. The holding fixture mounting bracket design determines the type of locking. Also refer to the technical data sheets of the generator in question.

**Important:**

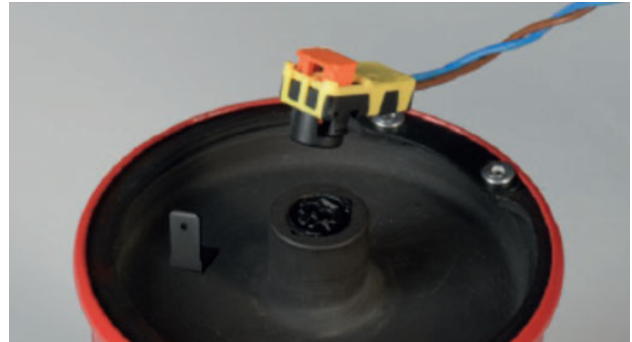
Note the operating direction when fitting into the holding fixture.

- The aerosol extinguishing generator is to be checked for a correct, tight fit once it is secured in the mounting bracket.

**Warning:**

Only after assembly is the connection cable to be connected to the aerosol extinguishing generator. Also ensure here that the connection cable is de-energized.

- Follow the assembly and dismantling instructions in the annex when attaching the connection cable to connector.



- Any connection cable that needs to be screened must be connected to the factory-fitted earth connection on the housing cover (see illustrations Page 4).
- Re-check the connection for a tight fit after finishing the assembly work.
- Following installation of the aerosol extinguishing generator, the enclosed inspection sticker is to be used to record the assembly date on the generator housing next to the arrow tip. The example shows *Month 03* in Year *2020*.

**5. Dismantling****Warning:**

The extinguishing generator housing is extremely hot after the extinguishing process: **Risk of burns!**

Appropriate tools and protective means are to be used if dismantling is required immediately after the extinguishing process.

**Warning:**

The connection cable must be detached before dismantling aerosol extinguishing generators without prior activation.

As for the rest, the dismantling is as follows:

- Unlock the connector by raising the locking mechanism (see assembly instruction in Annex No. 4).
- Remove the aerosol extinguishing generator from the mounting bracket after detaching the connection.

6. Periodic monitoring of aerosol extinguishing generators of the Dynameco E03 series

Ambient temperatures at the installation location determine the extent to which aerosol extinguishing generators of the Dynameco E03 series are to be regularly checked on external intactness and proper activation functioning.

The times between the inspection must be adapted to the prevailing installation conditions and the resulting demands placed. A weekly check is recommended, for instance, if the aerosol extinguishing generators to be monitored are subject to particular stresses such as vibrations, large temperature variations and marked contamination. Normally, an examination is to be carried out every three months.

Particular attention is to be given to the following points when examining an aerosol extinguishing generator of the Dynameco E03 series:

- The aerosol extinguishing generator housing must have no dents whatsoever or any visible damage. The extinguishing generator must be replaced if there is such damage.
- The metal foil sealing the aerosol extinguishing generator on the extinguishing agent escaping end (see illustrations Pos. 5) must neither be damaged nor have any excessive contamination from paints or similar substances which when extinguishing could stop the metal foil from bursting. In such an instance, either the aerosol extinguishing generator is to be replaced or the foil contamination removed.

 **Important:**

The metal foil must not be damaged during cleaning.

- Proper installation of the electrical lead to the generator is to be checked.
- An ohmmeter is to be used to examine proper functioning of the electrical ignition.

 **Warning:**

To prevent unintentional activation, the test current must not be above a maximum **40 mA**.

Proceed as follows in testing the igniting element:

- Remove the connector from the aerosol extinguishing generator.
- Connect a cable with free ends at the extinguishing generator.
- Examine the electrical resistance with an appropriate ohmmeter (see following illustration).

The igniting element should have the following resistance:
2.0 Ω (±0.2 Ω)



 **Important:**

The igniting element resistance cannot be measured directly at the panel connector (see Parts Drawing No. 6) of the aerosol extinguishing generator as the connection poles without plugged connector are fused by a short-circuit bridge.

- The connection between connection cable and aerosol extinguishing generator must be tight and locked (see Parts Drawing No. 3). Any missing fusing elements are to be replaced.
- The aerosol extinguishing generator must fit tightly in the provided mounting bracket.

 **Important:**

The maximum operating period of **5 years** should not be exceeded.

7. Information on excluding any misuse

 **Important:**

- Aerosol extinguishing generators are only to be stored in the authorised despatch packaging.
- Removing them is only to be done at the assembly stage.
- The storage and operating conditions as explained in these instructions for use are to be adhered to.
- Only externally non-damaged aerosol extinguishing generators are to be used for assembly. Contact the dealer if the extinguishing generators are damaged.
- On no account are aerosol extinguishing generators to be opened. Strictly prohibited are mechanical opening attempts, inserting objects or applying non-typical mechanical loads. Mortal danger is on hand. Any claims under guarantee cease to apply.
- Aerosol extinguishing generators are to be kept well away from the lasting effects of heat of whatever kind (naked flame, heating fan, radiant heater etc.). The above-described storage and operating temperatures are to be observed.
- The references in the safety data sheet, technical data sheets, the Technical Information for Handling and Transport as well as in the cleaning instructions are to be adhered to.

Illustrations:



Fig. 1

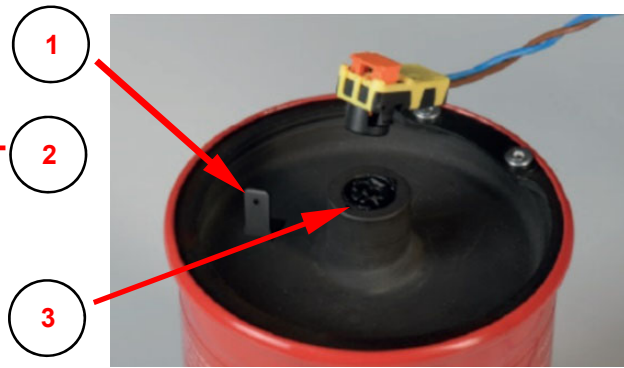


Fig. 2



Fig. 3

- 1 Earth connection plug
- 2 Connection cable with connector
- 3 Electrical connection with short-circuit bridge (observe orientation)
- 4 Inspection sticker with assembly date (orientation towards arrow tip when attaching and keep the expiry date in mind!)
- 5 Sealed activation area with bursting foil (clean and undamaged!)

ANNEX Assembly and disassembly of the cable with connector



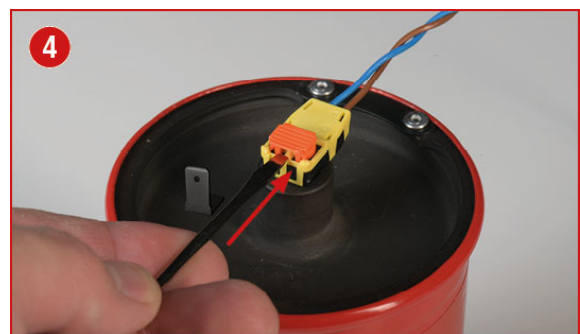
Check Orientation of Connector and Dynameco - Contact insert / Retainer



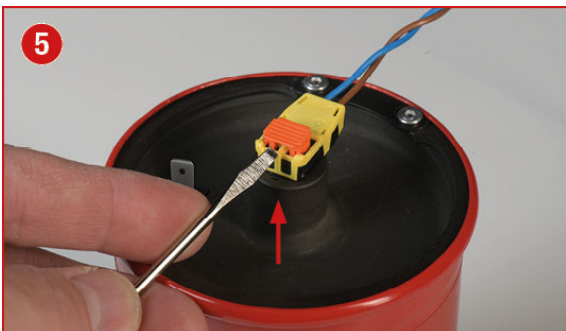
Link Connector to Dynameco-Contact insert / Retainer



Locking by pushing down the orange Clip onto the Connector



For unlocking use a suitable screwdriver



Lift the orange Clip on the Connector



Declamp the Connector from Dynameco-Contact insert / Retainer