Case Study	**PUBLIC TRANSPORT VEHICLES**
Region and year of installation	**Slovenia:** Izletnik Celje, Integral Zagorje **Greece:** BUSES THESSALONIKI COMPANY ΟΑΣΘ (City Public Transport), BUSES ATTIKA ATHENS (Capital City), BUSES KASTORIA NORTH GREECE **CRO, BIH, SRB:** Gradsko saobraćajno preduzeće GSP Beograd, CENTROTRANS EUROLINES D.D. , Sarajevo (BIH)
Areas of installation	➢ **Public transport vehicles (buses)** ➢ **Trucks** ➢ **Vessels and boats**
Implemented solutions	➢ Self-activated fire extinguishing ampoule BONPET ➢ Mini stable system BONPET

Self-activated fire extinguishing ampoule BONPET - Fire safety for your home and business

Ampoule is the most effective product for extinguishing a fire in small and indoor areas without being constantly present and a fire extinguishing product with an aesthetic appearance. Indispensable everywhere you assume that the temperature will rise rapidly, when the fire starts (ceiling or closed wall to the potential location for a fire).

The best effect for extinguishing fires of class A, is when the ampoule covers approximately 8m3 of an area. Suitable for extinguishing fires of classes A, B and F. It has a 10-year product life expectancy and 10-year warranty with no need for maintenance.

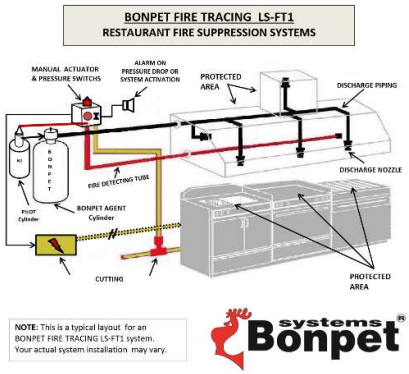
No false alarms, without additional damage and it is human and environment friendly (no halons).

Ampoule Bonpet – how it works? Fire safety and how to prevent fire?

- *When a fire breaks out in a small enclosed area and temperature rises, extinguishing liquid simultaneously begins to heat and as a result, the liquid starts to extend in the glass ampoule.*
- *When the temperature of the extinguishing liquid is approximately 85°C ± 5°C the glass breaks into pieces which allows the liquid to drop into the area, where endothermic process begins.*
- *It takes the energy from the fire and starts to cool the area. As a side product of this endothermic reaction, small quantities of nitrogen and carbon dioxide are released. Their function is to prevent the entrance of oxygen to the burning area.*
- *Remaining components that do not decay, form a protective layer over the surface of the extinguishing liquid, which prevents re-ignition. Ampoule BONPET can be used manually by throwing the ampoule directly into the source of a fire.*

Mini stabile system

Self-activated, effective and easy to use for extinguishing fires in kitchens or smaller flammable risky areas. "Mini" stable system is suitable for extinguishing fires of classes A, B, F and it has great effect at extinguishing with a low amount of liquid Bonpet



Function

It functions as a special pipe that acts like a heat detector. The pipe is flexible and elastic and it can be installed everywhere. On one end the pipe is connected to a special valve with a trap, on the other end to a manual trigger. The pipe is under the pressure of 18 bars, diameter is 6 mm. The pipe transforms and activates at the temperature of 160-180°C. In case of a fire high temperature and flames cause the explosion of the pipe which leads to a drop of a pressure in the pipe causing self- activation and extinguishing a fire.

Advantages

- No false alarms, system only activates when the temperature rises.
- Does not cause any damages during the fire extinguishing and its remaining components are easily cleaned.
- Unlimited product life expectancy with 1-year warranty (subject to regular maintenance of the system).
- Maintenance is bounded only on switching the liquid Bonpet.
- Extinguishing without sealing a premises (in comparison when extinguishing with CO2).
- The extinguishing is not subject to prior evacuation of staff.
- It creates a layer on surface to prevent another ignition.
- Unlimited options for detecting and consequently extinguishing a fire in the early stages.
- Easy to install the flexible pipes for detecting the fire; the fire can be detected on all the locations with high stage of fire hazard, like on inaccessible locations.
- No outside factor can trigger the detector (like vibration, shock, high concentration of oil, fat or dust).
- Source and voltage cannot trigger the detector

Public transport vehicles (buses), Trucks, Vessels and boats