ENSURE SAFE ESCAPE
– use certified excellence
A landmark for
THE SAFE ESCAPE
The majority of bus fires start in the engine compartment, usually out of sight of the bus driver. Once a fire has started it is important to detect, control and ultimately extinguish the fire as early as possible to avoid injuries, loss of lives, costs related to property damages and to secure business continuity. Further, an efficient fire detection and suppression system greatly enhances the time available for safe escape in the event of a fire.

SP Technical Research Institute of Sweden (SP) launched a project in 2005 with the objective to create a safer environment for passengers and bus drivers worldwide. The result is the new certification system: P-mark SPCR 183 (SP Certification rules No 183).
The P-mark is SP’s own certification mark, and can be seen on a number of products. To P-mark a product, it must pass a type test. The manufacturer’s factory production control (FPC) is also reviewed by our auditors as part of the overall quality assurance. The requirements are set up in certification schemes, specific for each product type. The certification schemes are based on national or international standards, in order to live up to the high quality principles associated with the P-mark.

A new certification system
P-mark SPCR 183 is a new certification system for fire suppression systems in engine compartments of buses and coaches. To obtain P-mark SPCR 183, the fire suppression system must fulfill the requirements in SP method 4912 (see next page):
In addition all system components included in the full suppression system such as nozzles, pressure cylinders, piping, detectors, electronic components, control panels, will be tested for harsh environments, EMC, change in temperature, corrosion, vibration, humidity extremes etc.
A STATE-OF-THE-ART EVALUATION METHOD

The P-mark SPCR 183 is based on SP method 4912, a method that specifies requirements for the efficacy and function of fire suppression systems in engine compartments of buses and coaches. During the development of SP method 4912, a reference group with representatives from transit authorities, insurance companies, bus associations, bus manufacturers and fire suppression system producers from all over the world have contributed with valuable input.

Through collaboration with this worldwide network of expertise, we are confident that SP method 4912 represents state-of-the-art evaluation of such equipment and will be accepted as a global standard for assessing the quality of fire suppression systems.

A reliable test method

SP 4912 is carried out in a test enclosure where the fire-fighting performance of different suppression systems can be evaluated in a well-defined and objective way.

In the typified enclosure, different petrol-based fires are initiated that challenge the capability of the suppression system being tested. The test method includes realistic airflows and relevant fire scenarios. In addition, the test method is repeatable and reproducible. The test method also includes testing of re-ignition due to fuel spray of flammable liquid onto hot surfaces.
SP Fire Technology

– A LEADER IN EVALUATING
FIRE-FIGHTING SYSTEMS

SP Fire Technology is one of Europe’s largest organizations for the evaluation of extinguishing agents and fire-fighting systems, as well as for research in this field. We are involved in standardization work for IMO, CEN and ISO. We perform standardized fire tests and also develop tests to meet specific requirements and customer needs.

Standardized testing is an important working area, involving testing of fire suppression systems (sprinklers, gas, water mist, foam) and portable fire extinguishers and we are accredited for a large number of test methods. Other working areas include 25-year control of sprinklers and piping, and large-scale testing of fuel tanks. We also perform forensic investigations of fires. Our large fire test halls enable realistic fire tests of real installations and equipment under controlled conditions, and we can provide assistance in classification of goods for optimization of sprinkler systems and provide data for computer simulations. We help our customers optimize extinguishing systems for their specific needs.

Research areas include different types of suppression systems, with the aim of optimizing fire fighting, provide data for the development of new systems and producing material as a basis for standardization. We carry out large-scale experiments, and conduct extensive research in conjunction with international partners in areas such as fire safety in tunnels and underground facilities, on ships and in fuel storage depots. We also investigate environmental effects of fire smoke and water used in fighting fires. Results from our research provide fire safety systems that are used throughout the world.

SP Technical Research Institute of Sweden (SP) is a leading international research institute. We work closely with our customers to create value, delivering high-quality input in all parts of the innovation chain, and thus playing an important part in assisting the competitiveness of industry and its evolution toward sustainable development.

SP is the parent company in a group consisting of six wholly owned subsidiary companies. The Swedish state is the sole shareholder of the company.

SP operates from about 30 sites all over Sweden and Denmark. Its headquarters and main facilities are located in Borås.
WHY CHOOSE A P-MARKED FIRE SUPPRESSION SYSTEM?

- The fire suppression system has been fire tested in a well-defined and objective way as well as to realistic fire hazards that can occur on a bus.
- Included components in the fire suppression system have been tested for harsh environments.
- The fire suppression manufacturer’s factory production control (FPC) is reviewed by independent approved third party auditors as part of the overall quality assurance.
- Enabling safe escape for passengers.
- Reduction of loss of lives.
- Reduction of loss of buses.
- Securing business continuity.
- Reduction of societal costs.
- Enhancing goodwill.

[www.sp.se/safebus](http://www.sp.se/safebus)