



# SLOVENSKI STANDARD

## SIST EN 15767-1:2009

01-september-2009

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Portable equipment for projecting extinguishing agents supplied by fire fighting pumps -  
Portable monitors - Part 1: General requirements for portable monitor assemblies

Tragbare Geräte zum Ausbringen von Löschmitteln, welche mit Feuerlöschpumpen  
gefördert werden - Tragbare Werfer - Teil 1: Allgemeine Anforderungen für tragbare  
Werfer

(standards.iteh.ai)

Equipement portable de projection d'agents d'extinction alimenté par des pompes à  
usage incendie - Lances-canon portables - Partie 1: Prescriptions générales pour les  
ensembles lances-canon portables

Ta slovenski standard je istoveten z: EN 15767-1:2009

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**ICS:**

13.220.10 Gašenje požara Fire-fighting

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 15767-1**

June 2009

ICS 13.220.10

English Version

**Portable equipment for projecting extinguishing agents supplied  
by fire fighting pumps - Portable monitors - Part 1: General  
requirements for portable monitor assemblies**

Équipement portable de projection d'agents d'extinction  
alimenté par des pompes à usage incendie - Lances-canon  
portables - Partie 1: Prescriptions générales pour les  
ensembles lances-canons portables

Tragbare Geräte zum Ausbringen von Löschmitteln, welche  
mit Feuerlöschpumpen gefördert werden - Tragbare Werfer  
- Teil 1: Allgemeine Anforderungen für tragbare Werfer

This European Standard was approved by CEN on 23 April 2009.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 15767-1:2009) has been prepared by Technical Committee CEN/TC 192 "Fire service equipment", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

EN 15767 consists of the following parts, under the general title *Portable equipment for projecting extinguishing agents supplied by fire fighting pumps – Portable monitors*:

- Part 1: General requirements for portable monitor assemblies;
- Part 2: Water nozzles;
- Part 3: Foam devices<sup>1)</sup>.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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1) Under preparation.

## Introduction

This European Standard has been created to provide a minimum level of safety and performance criteria.

Its purpose is not to define a specific monitor design but to help the user in understanding and choosing the correct equipment.

The manufacturer may be defined as the person or company taking technical responsibility for the supply of the product.

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## 1 Scope

**1.1** This European Standard specifies safety requirements, performance requirements, test methods, instructions for use and maintenance, and marking requirements for portable monitor assemblies.

NOTE 1 Additional requirements for water nozzles and foam devices can be found in EN 15767-2 and prEN 15767-3 respectively.

NOTE 2 Fitting systems are dealt with in national standards or requirements, respectively.

This European Standard is applicable to portable monitor assemblies that can be both permanently installed (e.g. on a flange, a vehicle, a fire boat, etc.) and can also be used as portable monitor assemblies.

This standard should be read in conjunction with either part 2 or 3.

**1.2** This European Standard is not applicable to monitors permanently installed on firefighting and rescue service vehicles, for which requirements are given in EN 1846-3 [2].

**1.3** This European Standard is not applicable to portable monitor assemblies which are manufactured before its date of publication.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15767-2, *Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable monitors — Part 2: Water nozzles*

prEN 15767-3, *Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable monitors — Part 3: Foam devices*

## 3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

### 3.1

#### **portable monitor assembly**

combination of components for ground operations that connects to a water supply via hose(s) and coupling(s) and projects extinguishing agents according to the operators requirements

### 3.2

#### **portable monitor body**

portable monitor assembly without nozzle

### 3.3

#### **nozzle**

component connected to the outlet of the monitor body that controls the water or the foam flowrate and/or pattern

NOTE Water nozzles are defined in EN 15767-2 and foam devices are defined in prEN 15767-3.

### 3.4

#### **pressures**

NOTE 1 The pressures are expressed in bar.

**EN 15767-1:2009 (E)**

NOTE 2 1 bar = 0,1 Mpa ( $10^5$  Pa).

**3.4.1**  
**reference pressure**

$p_R$   
standard working pressure used to run hydraulic tests and dynamic leakage tests

**3.4.2**  
**nominal pressure**

$p_N$   
maximum working pressure

**3.4.3**  
**test pressure**

$p_t$   
pressure used for static leakage tests

**3.4.4**  
**burst pressure**

$p_B$   
static pressure used for burst test

**3.4.5**  
**pressure loss**

$\Delta_p$   
difference between the inlet and the outlet pressure of the portable monitor body for a given flow

**3.4.6**  
**manufacturer's stated maximum flow**

$Q_{max}$   
flow under which the portable monitor assembly can be operated safely and efficiently

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## 4 Components

A portable monitor assembly shall comprise at least the following components (see Figure 1):

- a) a portable monitor body:
  - 1) a fitting system (1). Where the fitting system has more than one connection or inlet they shall be arranged in a way that no extinguishing agent can unintentionally exit any inlet (e.g. by the use of a non return valve);
  - 2) a ground base (2);
  - 3) a carrying device (3);
  - 4) optional: a horizontal and vertical travel device (5);
  - 5) optional: an oscillating device (not shown);
  - 6) optional: a safety device against uncontrolled motion (not shown);
- b) a nozzle (4), complying with EN 15767-2 or prEN 15767-3.



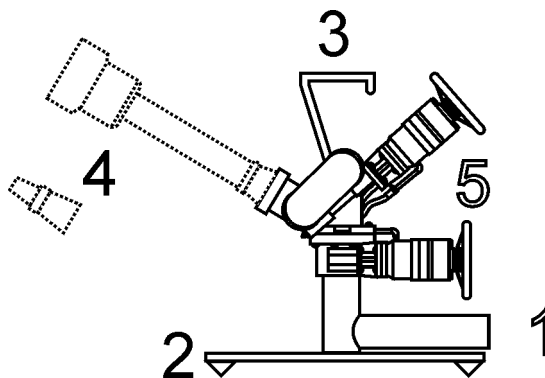


Figure 1 – Portable monitor assembly

## 5 Requirements

### 5.1 Mechanical characteristics

#### 5.1.1 Fitting systems

Portable monitor bodies shall be equipped with 360° fulltime swivelling inlet elements.

NOTE Fitting systems should not impair the performance of the monitor.

#### 5.1.2 Mass

Each part of the portable monitor assembly shall be less than 20 kg in mass.

#### 5.1.3 Operating and handling elements

**5.1.3.1** The portable monitor assembly should be ergonomically designed to be operated without risk of injury, when wearing firefighter's gloves conforming to EN 659 [1].

**5.1.3.2** If a shut off device is provided, it shall be possible for the operator to control the speed of opening and closing. This shall not apply to safety devices.

NOTE Any shut-off device should be easy to operate in a controlled manner, in order to minimize the risk of water hammer.

**5.1.3.3** The torques and forces needed for moving the operating elements shall not exceed the values given in Table 1 at pressures up to the nominal pressure.

Table 1 — Maximum torques and forces

Type of operating element	Torque N·m	Force N
Valve handle	20	-
Vertical and horizontal travel elements (handwheels)	15	-
Vertical and horizontal travel elements (levers)	20	-
Fitting systems	15	-
Other devices	-	100

**5.1.3.4** In the case of portable monitor bodies which are opened and closed with a valve, the "closed" position shall be located in the following position:

- with a valve handle: direction of the flow,
- with a lever: at right angle to the direction of the flow,
- with handwheels: in a clock wise direction.

If a different operating element is used, the "closed" position shall be clearly identified by visual means.

## 5.2 Materials

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The materials used shall be selected in such a way that all the requirements in Clause 5 are met, subject to the tests defined in Clause 6.

The monitor body shall pass the frost test defined in 6.2.

## 5.3 Hydraulic characteristics

### 5.3.1 Pressures

The following pressures shall be used for the determination of the hydraulic characteristics:

- reference pressure (measured at the outlet of the portable monitor body):  $p_R = 6 \text{ bar} \pm 0,1 \text{ bar}$ ;
- nominal pressure (measured at the inlet of the portable monitor body):  $p_N = 16 \text{ bar}$ ;
- test pressure (measured at the inlet of the portable monitor body):  $p_t = 25,5 \text{ bar}$ ;
- burst pressure (measured at the inlet of the portable monitor body):  $p_B = 35 \text{ bar}$ .

### 5.3.2 Pressure loss

The manufacturer shall provide, in the normative datasheet, the pressure loss curve for the portable monitor body from the minimum to the maximum flows recommended by the manufacturer.

## 5.4 Hydrostatic requirements

The portable monitor body shall fulfil the tests defined in 6.3.

## 5.5 Stability requirements

The portable monitor assembly shall be designed to be stable when operated at the manufacturer's stated maximum flow ( $Q_{\max}$ ) in the most disadvantageous direction. The portable monitor assembly shall fulfil the tests defined in 6.4.

The nozzles matched to a portable monitor body shall not deliver more than  $Q_{\max}$  at the reference pressure.

## 6 Testing and verification

### 6.1 General

All the tests listed below are type tests.

Unless otherwise specified, tests shall be carried out at the reference pressure  $p_R$ , in the following order.

All tests shall be done with water only.

NOTE 1 The actual test results can be entered in the data sheet when these exceed the minimum requirements given in this Standard.

NOTE 2 Guidance for acceptance tests on delivery is given in Annex A.

### 6.2 Frost test

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The portable monitor body shall have water passed through it for 1 min, uncoupled, drained for 1 min and stored in the closed position, if applicable, at a temperature of  $-15\text{ °C} \pm 2\text{ °C}$  for 30 min.

Following this, it shall still be possible to move the operating elements manually.

NOTE Hand protection should be used when carrying out this test.

### 6.3 Hydrostatic test

#### 6.3.1 Portable monitor body without pressure limiting device

If a shut off device is fitted, it shall be closed. If a shut off device is not fitted, the monitor body outlet shall be plugged.

All air shall be bled out of the system.

The pressure shall be increased by 5 bar increments and held for 30 s at each pressure up to  $p_B$ .

This maximum pressure shall be held for 1 min without rupture of the portable monitor body.

#### 6.3.2 Portable monitor body equipped with a pressure limiting device

The tests defined in 6.3.1 shall be conducted up to the pressure reached with the limiting device, without rupture of the portable monitor body. The pressure limiting device shall be set below 35 bar.