



SLOVENSKI STANDARD

SIST EN 15767-3:2011

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Prenosna oprema za črpanje in uporabo gasilnega sredstva iz gasilskih črpalk - Prenosni monitorji - 3. del: Gasilno sredstvo - pena

Portable equipment for projecting extinguishing agents supplied by fire fighting pumps -
Portable monitors - Part 3: Foam devices

Tragbare Geräte zum Ausbringen von Löschmitteln, welche mit Feuerlöschpumpen
gefördert werden - Tragbare Werfer - Teil 3: Schaumdüsen

Equipement portable de projection d'agents d'extinction alimenté par des pompes à
usage incendie - Lances-canon portables - Partie 3: Dispositifs pour la mousse

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Ta slovenski standard je istoveten z: **EN 15767-3:2010**

ICS:

13.220.10 Gašenje požara Fire-fighting

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 15767-3

September 2010

ICS 13.220.10

English Version

Portable equipment for projecting extinguishing agents supplied by fire fighting pumps - Portable monitors - Part 3: Foam devices

Équipement portable de projection d'agents d'extinction
alimenté par des pompes à usage incendie - Lances-canon
portables - Partie 3: Dispositifs pour la mousse

Tragbare Geräte zum Ausbringen von Löschmitteln, welche
mit Feuerlöschpumpen gefördert werden - Tragbare Werfer
- Teil 3: Schaumdüsen

This European Standard was approved by CEN on 16 July 2010.

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Foreword

This document (EN 15767-3:2010) 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of an identical text or by endorsement, at the latest by **March 2011**, and conflicting national standards shall be withdrawn at the latest by **March 2011**.

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.

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.

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, Croatia, 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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EN 15767-3:2010 (E)**1 Scope**

1.1 In addition to the requirements given in EN 15767-1, this part of this European standard applies to devices designed for aspirating air and projecting low expansion foam and, in some cases, inducting foam concentrate. It specifies requirements for safety, performance, classification and designation, as well as test methods, instructions for use and maintenance and marking.

1.2 This European Standard is only applicable to foam devices which are manufactured after 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 15767-1:2009, *Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable monitors — Part 1: General requirements for portable monitor assemblies*

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

3 Terms and definitions

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For the purposes of this document, the terms and definitions given in EN 15767-1:2009 and the following apply.

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3.1 foam concentrate

liquid which is diluted with water to produce foam solution

[EN 1568-1:2008, 3.7]

3.2 foam solution

solution of foam concentrate in water

[EN 1568-1:2008, 3.8]

3.3 foam device

device designed for aspirating air and projecting foam and, in some cases, inducting foam concentrate

NOTE Several types of foam devices are described from 3.3.1 to 3.3.4.

3.3.1 foam cannon

device that transforms the foam solution pressure into velocity and mixes air with the foam solution to produce a coherent stream of firefighting foam in a tube

3.3.2 self-inducting nozzle

nozzle as described in EN 15767-2 equipped with a self-inducting system

3.3.3**pick-up tube**

non collapsible tube for transferring the foam concentrate to the inducting system

3.3.4**foam attachment**

device fitted to a water nozzle or a self-inducting nozzle that mixes air with the foam solution to produce firefighting foam

3.4**inducting system**

device for mixing foam concentrate with water at a set rate

3.5**self-inducting system**

inducting system integrated into a foam device

3.6**spreader**

device to modify the shape of the foam stream into a flat spray

3.7**induction rate**

ratio of foam concentrate to the foam solution

3.8**metering device**

device controlling the induction rate

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3.9**maximum flow**

Q_{\max}

maximum combination of flow and pressure under which the foam device can be operated

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NOTE The value of the maximum flow is given by the manufacturer.

3.10**expansion****expansion value****expansion ratio**

ratio of the volume of foam to the volume of the foam solution from which it was made

[EN 1568-1:2008, 3.2]

3.11**low expansion foam**

foam which has an expansion ratio less than 20

[EN 1568-1:2008, 3.3]

4 Requirements

4.1 Mechanical characteristics

4.1.1 Mass

The foam device shall have a maximum mass as specified in Table 1. The maximum mass does not apply to seawater-resistant foam devices.

Table 1 — Maximum mass

Q_{\max} l/min	Maximum mass of the foam device kg
< 2 000	4
2 000 - 4 000	8
4 000 – 8 000	12
> 8 000	20

4.1.2 Operating and handling elements

The torques necessary to move the operating elements shall not exceed the values given in Table 2 at pressures up to the nominal pressure.

Table 2 — Maximum torques

Type of operating element	Torque N·m
Lever	20
Valve handle	15
Rotating operating elements	15

4.1.3 Flow adjustment positions

The flow settings of the foam device equipped with selectable flowrate shall be clearly identifiable by visual means.

4.1.4 Jet adjustment positions

The different jet positions of a foam device equipped with adjustable jet positions shall be clearly marked.

4.2 Materials

When tested in accordance with Clause 5 materials shall conform to Clause 4.

The foam device shall pass the heat and frost tests specified in 5.3.

4.3 Hydraulic characteristics

4.3.1 Pressures

The following pressures, measured at the foam device inlet, shall be used for the determination of the hydraulic characteristics:

- reference pressure: $p_R = (6 \pm 0,1)$ bar;
- nominal pressure: $p_N = 16$ bar.

4.3.2 Flowrates

All flowrates indicated on the foam device shall be measured at the reference pressure p_R .

The flowrates measured at the reference pressure p_R shall not deviate by more than - 0/+ 10 % of the flowrate setting of the foam device.

4.3.3 Effective throw

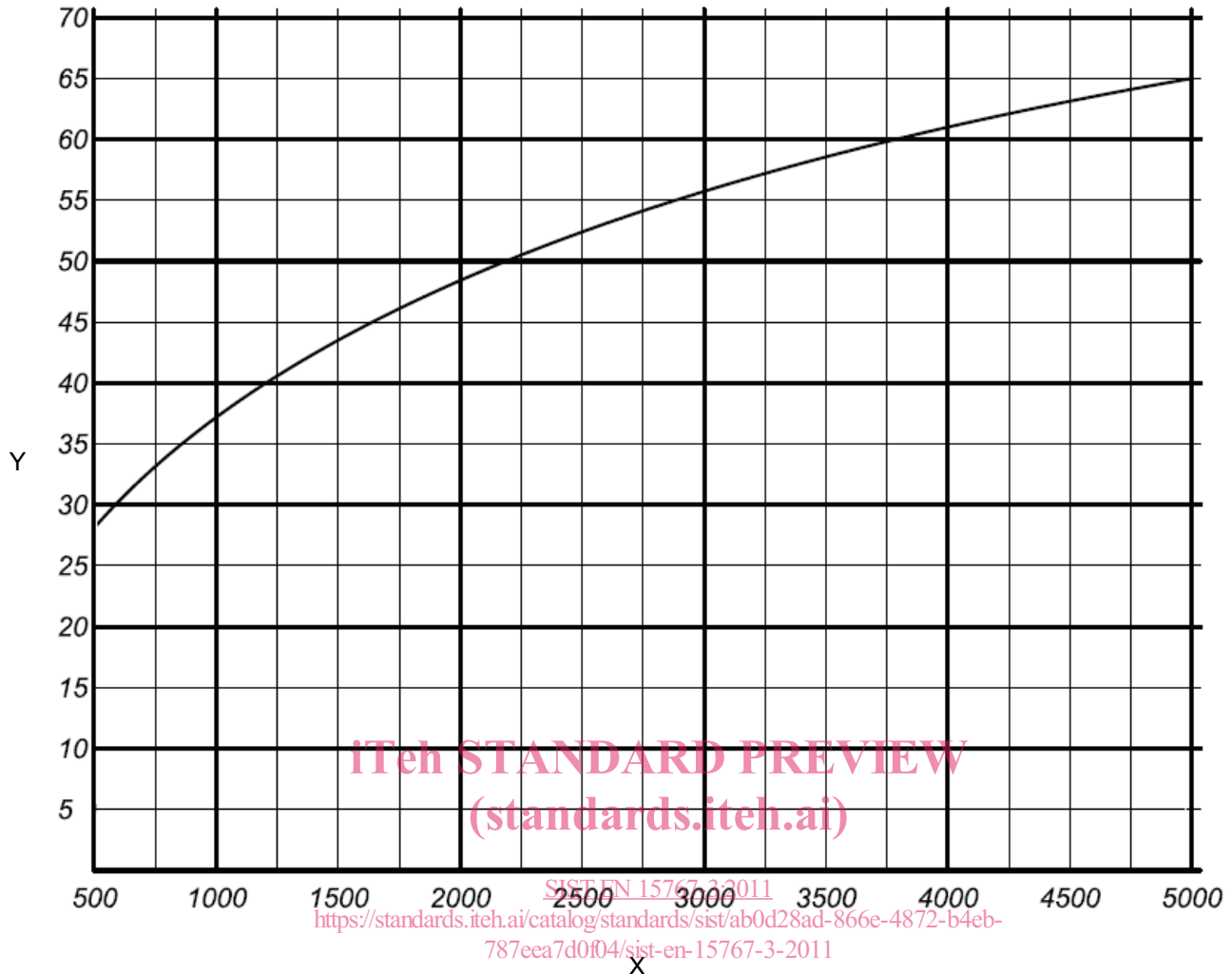
The foam device shall achieve, for each flowrate position above 500 l/min, a minimum effective throw d_{eff} as shown in Figure 1, when set at the reference pressure.

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**Key**

- X flowrate Q in litres per minute
 Y effective throw d_{eff} in metres

Figure 1 — Effective throw**4.3.4 Spray jet**

The spray jet of self-inducting nozzles shall have a spray angle of at least 100°.

5 Testing and verification**5.1 General**

All tests shall be with water only (see also information in Annex A).

Unless otherwise specified, tests shall be at the reference pressure p_R , in the following order, on foam cannons, self-inducting nozzles and foam attachments.

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

5.2 Jet spray angle measurement

Arrange the self-inducting nozzle on a fixed support in a horizontal position 1,5 m above the ground, in a zone where the wind speed is lower than 2 m/s.

Arrange a rule perpendicular to the flow at a distance of 1 m. This rule shall be marked to determine the spray angle.

5.3 Heat and frost test

5.3.1 Sensitivity to heat

The foam device shall function, without restriction, after it has been stored 24 h at $(55 \pm 2) ^\circ\text{C}$.

NOTE Hand protection should be used for this test.

5.3.2 Sensitivity to frost

The foam device shall be disconnected following operation for 1 min at the reference pressure p_R . It shall then be drained for 1 min and stored at a temperature of $(-15 \pm 2) ^\circ\text{C}$ for 30 min. Following this, the operating elements shall be movable manually.

NOTE Hand protection should be used for this test.

5.4 Flow and throw test

The effective throw shall be measured under the following conditions, in accordance with Figure 2:

- portable monitor body on the ground in the normal working position;
- inclination: $(30 \pm 2)^\circ$;
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- pressure at the inlet of the foam device: $p_R = 6 \text{ bar} \pm 0,1 \text{ bar}$;
- maximum wind speed: 2 m/s (Beaufort scale 3);
- effective throw (in metre): furthest droplets – 10 % = $d_{\text{eff}} = 0,9 d_{\text{max}}$.

The measurement shall be carried out when the system is stabilised.

The maximum effective throw shall be given in the instruction handbook.