SLOVENSKI STANDARD
SIST EN 16712-3:2015

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Prenosna oprema za črpanje in uporabo gasilnih sredstev iz gasilskih črpalk - Prenosna oprema za izdelavo gasilne pene - 3. del: Kombiniran ročnik za težko in srednjo peno PN 16

Portable equipment for projecting extinguishing agents supplied by fire fighting pumps - Portable foam equipment - Part 3: Low and medium expansion handheld foam branchpipes PN 16

Tragbare Geräte zum Ausbringen von Löschmitteln, die mit Feuerlöschpumpen gefördert werden - Tragbare Schaumgeräte - Teil 3: Schwer-und Mittelschaumrohre PN 16

Equipement portable de projection d’agents d’extinction alimenté par des pompes à usage incendie - Equipements mousse portables - Partie 3: Lances à mousse à main PN 16 bas et moyen foisonnement

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EUROPEAN STANDARD

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Portable equipment for projecting extinguishing agents supplied by fire fighting pumps - Portable foam equipment - Part 3: Low and medium expansion hand-held foam branchpipes PN 16

Equipement portable de projection d'agents d'extinction alimenté par des pompes à usage incendie - Equipements mousse portables - Partie 3 : Lances à mousse à main PN 16 bas et moyen foisonnement

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This European Standard was approved by CEN on 1 August 2015.

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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-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 16712-3:2015) has been prepared by Technical Committee CEN/TC 192 “Fire and Rescue 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of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

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 16712 consists of the following parts, under the general title “*Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable foam equipment*”:

— Part 1: Inductors PN 16;

— Part 2: Pick-up tubes;

— Part 3: Low and medium expansion hand-held foam branchpipes PN 16;

— Part 4: High expansion foam generators PN 16.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Hand-held foam branchpipes are used to expand foam water solution by the addition of air and to project the foam onto a fire or fire risk.

1 Scope

1.1 This European Standard applies to hand-held foam branchpipes, and self-inducting foam branchpipes, for low and medium expansion foam used by fire and rescue services and defines their specification and test procedures.

NOTE In this European Standard, the term “branchpipe” also refers to “hand-held foam branchpipes”.

1.2 This European Standard is not applicable to hand-held foam branchpipes which have been manufactured before its date of publication as European Standard.

2 Terms and definitions

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

2.1
handheld foam branchpipe
hand-operated device in which the water foam solution is mixed with air to produce foam that is then expelled in the form of a jet

Note 1 to entry: The branchpipe may be equipped with a pressure gauge.

2.2
combination handheld foam branchpipe

handheld foam branchpipe capable of producing either low expansion foam or medium expansion foam

Note 1 to entry: The branchpipe may be equipped with a pressure gauge.

2.3
pressures
Note 1 to entry: Pressures are expressed in bar.

Note 2 to entry: 1 bar = 0,1 MPa (10^5 Pa).

2.3.1
working pressure
p_1
pressure measured at the inlet of the branchpipe

2.3.2
nominal pressure
p_N
maximum working pressure measured at the inlet of the branchpipe

2.3.3
reference pressure
p_R
pressure measured at the inlet of the branchpipe used for performance tests

2.3.4
test pressure
p_t
static pressure used for leakage tests

2.4
expansion
expansion ratio
ratio of the volume of foam to the volume of the water foam solution from which it was made

2.4.1
low expansion foam
foam which has an expansion ratio less than 20

[SOURCE: EN 1568-3:2008, 3.3]

2.4.2
medium expansion foam
foam which has an expansion ratio greater than or equal to 20 but less than 200

[SOURCE: EN 1568-3:2008, 3.4]

2.5
self-inducting foam branchpipe
foam branchpipe and an induction system integrated into one device

3 Types

3.1 Branchpipes are classified according to Table 1 based on

— foam expansion,

— water foam solution flow at working pressure p_1 (in litres per minute).

3.2 Branchpipes are divided in two groups (low and medium expansion). The group they belong to shall be identified in the standard description and shall be marked according to 6.2.

Table 1 — Branchpipe types

Type	Foam expansion		Reference pressure bar	Water foam solution flow l/min	Permitted deviation %
S 1	Low expansion	4 to < 20	5	100	+10 0
S 2				200	
S 4				400	
S 8				800	
M 0,5	Medium expansion	20 to 200	5	50	+10 0
M 1				100	
M 2				200	
M 4				400	
M 8				800	

4 Designation

The designation of hand-held foam branchpipes in compliance with EN 16712-3 comprises

— name of the equipment,

— reference to EN 16712-3,

— type,

— self inducting system, if any, by adding “Y”.

EXAMPLE 1 A hand-held foam branchpipe for low expansion with a flow rate of 800 l/min is designated as follows:

Hand-held foam branchpipe EN 16712–3 — S 8

EXAMPLE 2 A combination hand-held foam branchpipe with a flow rate of 200 l/min is designated as follows:

Hand-held foam branchpipe EN 16712–3 — S 2/M 2

EXAMPLE 3 A hand-held foam branchpipe for low expansion with a flow rate of 800 l/min with self-inducting system is designated as follows:

Hand-held foam branchpipe EN 16712–3 — S 8 Y

EXAMPLE 4 A combination hand-held foam branchpipe with a flow rate of 200 l/min with self-inducting system is designated as follows:

Hand-held foam branchpipe EN 16712–3 — S 2/M 2 Y

EXAMPLE 5 A hand-held foam branchpipe for medium expansion with a flow rate of 400 l/min is designated as follows:

Hand-held foam branchpipe EN 16712–3 — M 4

5 Requirements and verification

5.1 Mechanical characteristics

5.1.1 Dimensions and mass

Dimensions and mass of branchpipes (without inlet coupling) shall be in accordance with Table 2.

Table 2 — Maximum dimensions and mass

Type	Dimensions			Mass
	Length	Width	Height	
	mm	mm	mm	kg
S 1	500	150	110	1,5
S 2	850	260	110	3
S 4	1 080	260	155	5
S 8	1 300	280	180	6
M 0,5	600	150	500	2
M 1	500	150	200	2
M 2	920	280	340	6
M 4	1 300	330	340	7
M 8	1 610	430	370	10
S 2/M 2	920	300	300	7
S 4/M 4	1 300	350	350	9
NOTE The maximum mass does not apply to seawater-resistant branchpipes.				

Verification

Dimensions and mass shall be measured in accordance with Table 2.

5.1.2 Operating and handling elements

At pressures up to the nominal pressure, the maximum torque required to operate the shut-off valve shall not exceed the values given in Table 3.

Table 3 — Torque

Flow rate	Torque
l/min	Nm
≤ 400	20
> 400	35

Verification

The torques shall be measured in accordance with Table 3. This test shall be conducted with water only.

5.2 Materials

The materials used shall be selected so that all the requirements in Clause 5 are met, subject to the tests defined in this European Standard.

The resistance to foam concentrate or additive shall be agreed between the supplier and the user.