SLOVENSKI STANDARD
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Hand-held branchpipes for fire service use - Part 3: Smooth bore jet and/or one fixed spray jet angle branchpipes PN 16

Strahlrohre für die Brandbekämpfung - Teil 3: Strahlrohre mit Vollstrahl und/oder einem unveränderlichen Sprühstrahlwinkel PN 16

Lances à main destinées aux services d'incendie et de secours - Partie 3: Lances à jet plein et/ou une diffusion à angle fixe PN 16

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English Version

Hand-held branchpipes for fire service use - Part 3: Smooth bore jet and/or one fixed spray jet angle branchpipes PN 16

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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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Foreword

This document (EN 15182-3:2007+A1:2009) 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of an identical text or by endorsement, at the latest by May 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.

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.

This document includes Amendment 1, approved by CEN on 2009-09-29.

This document supersedes EN 15182-3:2007.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

EN 15182 consists of the following parts, under the general title *Hand-held branchpipes for fire service use*:

— *Part 1: Common requirements;*

— *Part 2: Combination branchpipes PN 16;*

— *Part 3: Smooth bore jet and/or one fixed spray jet angle branchpipes PN 16;*

— *Part 4: High pressure branchpipes PN 40.*

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 United Kingdom.

1 Scope

In addition to the requirements given in EN 15182-1, this part of this European Standard applies to hand-held branchpipes with smooth bore jet and/or one fixed spray jet angle branchpipes PN 16, with a maximum flow rate of 1 000 l/min at a reference pressure of 6 bar (0,6 MPa). It deals with:

— safety requirements;

— performance requirements;

— test methods;

— classification and designation;

— information for use;

— marking and maintenance.

This part of this European Standard applies to branchpipes as defined in Annex A of EN 15182-1:2007.

NOTE 1 These branchpipes offer no or inadequate protection for firefighters when the spray angle is less than 30 ° and therefore, should not be used in high risk fire fighting situations such as internal attack.

NOTE 2 These branchpipes should not be used when fighting fires in or near electrical installations when the spray angle is less than 30 ° without written authorisation from the manufacturer in the manual. This authorisation from the manufacturer should include safety distances.

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 15182-1:2007, *Hand-held branchpipes for fire service use — Part 1: Common requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15182-1:2007 and the following apply.

3.1
smooth bore branchpipe
branchpipe providing a solid water stream

4 Requirements

4.1 General

The branchpipes covered by this standard shall comply with EN 15182-1.

4.2 Mechanical characteristics

4.2.1 Dimensions and mass

Branchpipes (without inlet coupling) shall not exceed the dimensions and masses specified in Table 1.

Table 1 — Dimensions and mass

Maximum flow rate l/min	Dimensions mm	Mass kg
≤ 500	450 × 300 × 150	3,5
> 500	600 × 350 × 200	5,5
NOTE The maximum mass does not apply to seawater-resistant branchpipes.		

4.2.2 Operating and handling elements

4.2.2.1 The torques needed 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	15
Valve handle	15
Rotating operating elements	10
Rotating inlet elements for fixed couplings	5

4.2.2.2 For branchpipes that are opened and closed with a valve handle, the "closed" position shall be located in the direction of the flow. If a different operating element is used, the "closed" position shall be clearly identified.

4.2.3 Jet adjustment positions

The jet positions, if applicable, shall be clearly marked.

4.3 Hydraulic characteristics

4.3.1 Pressures

The following pressures shall be used for determining the hydraulic characteristics:

— reference pressure: p_R = 6 bar [A1] ± 0,1 bar [A1];

— nominal pressure: p_N = 16 bar;

— test pressure: p_t = 25,5 bar;

— burst pressure: p_B = 60 bar.

4.3.2 Flow rates

All flow rates indicated on the branchpipe shall be measured at straight jet and/or at the spray jet.

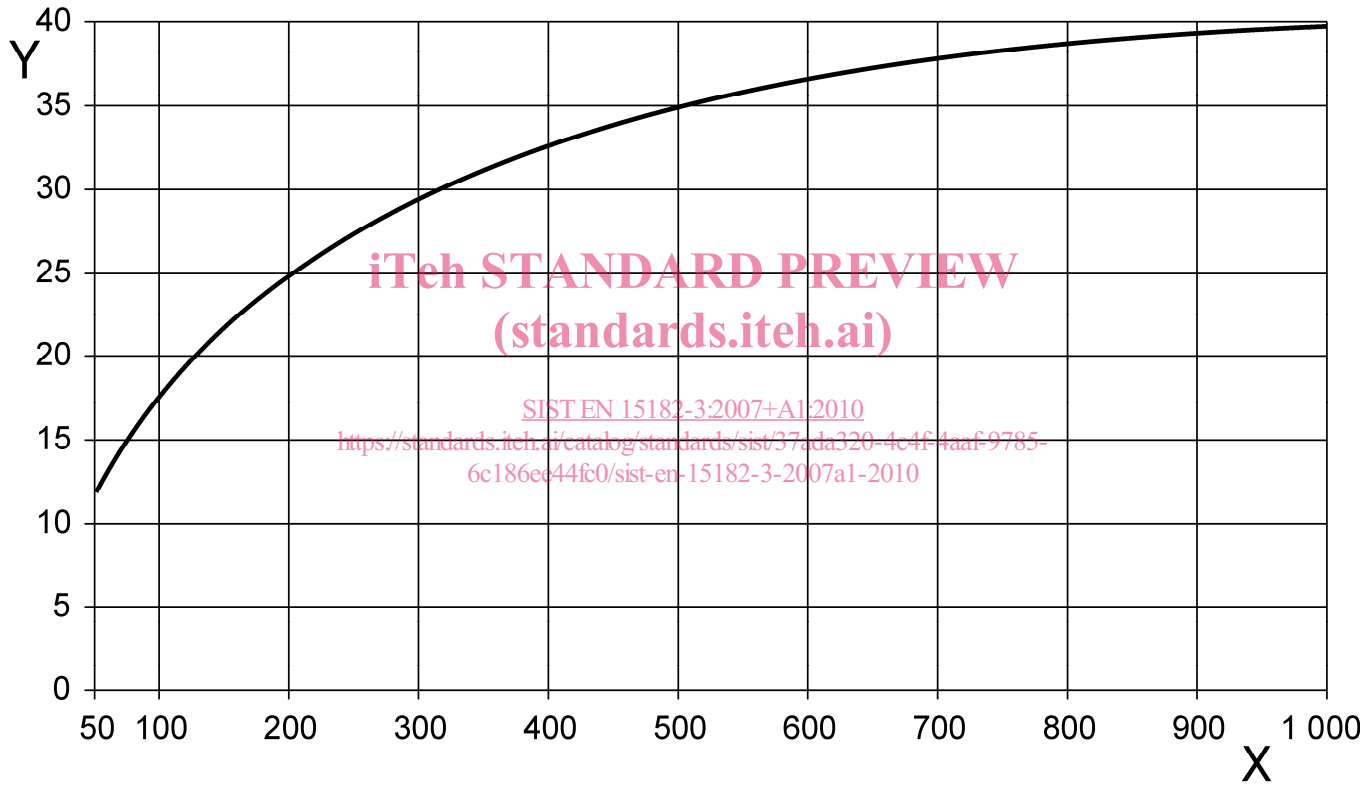
Table 3 shall apply to deviations in flow rates which can be set at the reference pressure p_R.

Table 3 — Deviation in the flow rate

Flow rate Q l/min	Deviation limit
0 to 250	- 0/+25 l/min
Above 250	- +0/+ 10 % (of set rate)

4.3.3 Effective throw

The combination branchpipes shall achieve, for each flow rate position above 50 l/min, an effective throw d_{eff} as shown in Figure 1 when set to a straight jet at the reference pressure.



Key

X Flow rate Q in l/min

Y Effective throw d_{eff} in m

Figure 1 — Effective throw

4.3.4 Spray jet

If the branchpipe has a spray jet, the spray jet shall have a minimum spray angle of 15°.

4.4 Leak-tightness

The closed branchpipe shall show no leakage during 1 min at the test pressure p_t = 25,5 bar.

NOTE No leakage means no visible weeping or drop formation.

The opened branchpipe shall show no leakage during 1 min at the nominal pressure p_N = 16 bar.

4.5 Hydrostatic requirements

The branchpipes shall fulfil the tests defined in 5.5.

5 Testing and proofs

5.1 General

Unless otherwise specified, tests shall be carried out at the reference pressure p_R, after the tests specified in part 1 of this European Standard, in the following order.

5.2 Spray angle measurement

The spray angle shall be measured using an angle measuring device.

5.3 Flow and throw test

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

— effective throw: latest droplets - 10 % = d_{eff} = 0,9 d_{max} ;

— pressure at the inlet of the branchpipe: p_R ;

— inclination: (30 ± 0,5) °;

— height: (1 ± 0,01) m (as per drawing);

— maximum wind speed: 2 m/s (Beaufort scale 3).

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

The maximum throw shall be given in the instruction handbook.