

SVENSK STANDARD

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Handhållna strålrör för bruk inom räddningstjänsten – Del 2: Kombinationsstrålrör PN 16

Hand-held branchpipes for fire service use – Part 2: Combination branchpipes PN 16



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Denna standard ersätter SS-EN 15182-2:2007, utgåva 1.

The European Standard EN 15182-2:2007+A1:2009 has the status of a Swedish Standard. This document contains the official English version of EN 15182-2:2007+A1:2009.

This standard supersedes the Swedish Standard SS-EN 15182-2:2007, edition 1.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 15182-2:2007+A1

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English Version

Hand-held branchpipes for fire service use - Part 2: Combination branchpipes PN 16

Lances à main destinées aux services d'incendie et de secours - Partie 2: Lances mixtes à débit et jet réglables
PN 16

Strahlrohre für die Brandbekämpfung - Teil 2:
Hohlstrahlrohre PN 16

This European Standard was approved by CEN on 23 December 2006 and includes Amendment 1 approved by CEN on 29 September 2009.

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Foreword

This document (EN 15182-2:2007+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of an identical text or by endorsement, at the latest by May 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.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 15182-2:2007.

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.*

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1 Scope

In addition to the requirements given in EN 15182-1, this Part of this European Standard applies to hand-held combination branchpipes (nozzles) 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;
- operating instructions;
- marking and maintenance.

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

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

combination branchpipe

branchpipe including a shut-off device and A_1 an adjustable pattern A_1 , corresponding to the following definitions

NOTE Branchpipe is defined in 3.1 of EN 15182-1:2007.

3.1.1

combination branchpipe – type 1

combination branchpipe with A_1 adjustable pattern A_1 at variable flow

NOTE Changing pattern changes the flow.

3.1.2

combination branchpipe – type 2

combination branchpipe with A_1 adjustable pattern A_1 at constant flow

NOTE Changing pattern does not change the flow.

3.1.3

combination branchpipe – type 3

combination branchpipe with A_1 adjustable pattern A_1 at selectable, constant flow

NOTE Changing pattern does not change the flow.

3.1.4

combination branchpipe – type 4 (automatic branchpipes)

combination branchpipe with integrated pressure control device

NOTE Changing pattern does not change the flow.

3.1.4.1

combination branchpipe – type 4.1

combination branchpipe with A_1 adjustable pattern A_1 at constant pressure

3.1.4.2

combination branchpipe – type 4.2

combination branchpipe with A_1 adjustable pattern A_1 and selectable flow at constant pressure

3.2

jet

3.2.1

narrow spray jet

intermediate position between the straight jet and the wide spray jet providing both throw as well as protection

3.2.2

wide spray jet

jet solely providing protection for the operator(s)

3.3

haptical device

single mechanical device engaging detents

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

The 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 by visual and/or haptical means.

4.2.2.3 It shall be possible to open any type of branchpipe in the wide spray position.

4.2.3 Flow adjustment positions

If a branchpipe has a device to select flow rate, then the flow rate's settings shall be easily identifiable by both visual and mechanical means (haptical device with corresponding numerical values).

If using a rotating operating element for flow adjustment, the adjustment shall be achieved by a rotation movement of a maximum of 180°.

4.2.4 Jet adjustment positions

The various jet positions shall be clearly marked.

The narrow spray jet position (see 4.3.5) shall be easily identifiable by both visual and mechanical means (haptical devices).

Jet adjustment from a straight jet to a wide spray jet with a spray angle of at least 100° shall be achieved by a rotation movement of between 70° and maximum 180° for branchpipes with a maximum flow rate less than or equal to 500 l/min and between 70° and 270° for a maximum flow rate higher than 500 l/min.

NOTE This requirement is included in this standard as a safety detail to provide the user with a means to produce a wide protective spray jet of at least 100° achieved within 180° rotation (one hand twist movement).

It shall be possible to open the branchpipe in a spray angle of at least 30°.

4.3 Hydraulic characteristics

4.3.1 Pressures

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

- reference pressure: $p_R = 6 \text{ bar} \sqrt{A_1} \pm 0,1 \text{ bar} \sqrt{A_1}$;
- median pressure for type 4 branchpipes: p_m ;
- nominal pressure: $p_N = 16 \text{ bar}$;
- test pressure: $p_t = 25,5 \text{ bar}$;

— 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 at the maximum spray angle position.

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

NOTE The deviation should also apply when the shape of the stream is altered.

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.