SLOVENSKI STANDARD
SIST EN 15182-4:2019

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Nadomešča:
SIST EN 15182-4:2007+A1:2010

Prenosna oprema za črpanje in uporabo gasilnega sredstva iz gasilskih črpalk - Gasilski ročniki - 4. del: Visokotlačni ročniki PN 40

Portable equipment for projecting extinguishing agents supplied by firefighting pumps - Hand-held branchpipes for fire service use - Part 4: High pressure branchpipes PN 40

Tragbare Geräte zum Ausbringen von Löschmitteln, die mit Feuerlöschpumpen gefördert werden - Strahlrohre für die Brandbekämpfung - Teil 4: Hochdruckstrahlrohre PN 40

Équipement portable de projection d'agents d'extinction alimenté par des pompes à usage incendie - Lances à main destinées aux services d'incendie et de secours - Partie 4: Lances haute pression PN 40

Ta slovenski standard je istoveten z: **EN 15182-4:2019**

ICS:

13.220.10	Gašenje požara	Fire-fighting

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EUROPEAN STANDARD

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English Version

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This European Standard was approved by CEN on 10 June 2019.

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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
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 15182-4:2019) 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of an identical text or by endorsement, at the latest by February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

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

This document supersedes EN 15182-4:2007+A1:2009.

Compared to EN 15182-4:2007+A1:2009 the following changes have been made:

— new maximum flowrate: 250 l/min;

— the definitions have been updated;

— each verification has been placed under the corresponding requirement;

— a test to measure the forces needed to move the rotating elements which have detents (4.2.2) has been added;

— the requirements for flowrates (4.3.2) have been updated;

— the verifications for leak-tightness (4.4) and hydrostatic behaviour (4.5) have been updated;

— improvement of the wording/editorial changes.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

In addition to the requirements given in EN 15182-1:2019, this document applies to hand-held high pressure branchpipes (nozzles) with a nominal pressure of 40 bar (4,0 MPa) PN 40, with a maximum flow rate up to 250 l/min at a reference pressure of 6 bar (0,6 MPa). It deals with:

— safety requirements;

— performance requirements;

— test methods.

This document applies to branchpipes as defined in Annex A of EN 15182-1:2019.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 15182-1:2019, *Portable equipment for projecting extinguishing agents supplied by firefighting pumps — 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 15182-1:2019 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
high pressure branchpipe
branchpipe including a shut-off device and an adjustable pattern with a nominal pressure (maximum operating pressure) of 40 bar

Note 1 to entry: Branchpipe is defined in 3.1 of EN 15182-1:2019.

3.1.1
high pressure branchpipe – type 1
high pressure branchpipe with adjustable pattern at variable flow

Note 1 to entry: Changing pattern changes the flow at one given pressure.

3.1.2
high pressure branchpipe – type 2
high pressure branchpipe with adjustable pattern at fixed flow

Note 1 to entry: Changing pattern does not change the flow at one given pressure.

3.1.3
high pressure branchpipe – type 3
high pressure branchpipe with adjustable pattern at selectable, fixed flow

Note 1 to entry: Changing pattern does not change the flow at one given pressure.

3.1.4
high pressure branchpipe – type 4
automatic pressure branchpipe
high pressure branchpipe with constant pressure

Note 1 to entry: Changing pattern does not change the flow at one given pressure.

3.1.4.1
high pressure branchpipe – type 4.1
high pressure branchpipe with adjustable pattern at constant pressure

3.1.4.2
high pressure branchpipe – type 4.2
high pressure branchpipe with adjustable pattern and selectable flow at constant pressure

3.2
narrow spray jet
intermediate position between the straight jet and the wide spray jet providing both throw and protection

3.3
wide spray jet
jet solely providing protection for the operator(s)

3.4
haptical device
single mechanical device engaging detents

4 Requirements and verification

4.1 General

The branchpipes, covered by this document, shall comply with EN 15182-1:2019.

All the tests defined in this document are type tests.

Unless otherwise specified, tests shall be carried out, at the reference pressure p_R.

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

Dimensions mm	**Mass** kg
550 × 350 × 150	3,5
NOTE 1 The maximum mass does not apply to branchpipes designed for special application (e.g. fire-fighting on sea-going vessels, disinfection, etc.). NOTE 2 To avoid unsafe disconnection of the branchpipe from the hose during fire service use, it is advised to connect the inlet of the branchpipe to the hose with an appropriate device.	

Verification

Dimensions and mass shall be measured in accordance with Table 1.

4.2.2 Operating and handling elements

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 —Torque

Type of operating element	**Maximum torque** Nm
Lever	15
Valve handle	15
Trigger	15
Rotating operating elements	10
Rotating inlet elements for fixed couplings or screwed hose	5

Verification

The torques shall be measured in accordance with Table 2. This test shall be conducted with water only.

The forces needed to move the rotating elements which have detents shall be between 15 N and 75 N.

Verification

— *Measure the force of rotating elements which have detents in dry conditions without flowing.*

— *Make the rotating element turn 300 cycles without flowing water.*

NOTE A rotation means rotating the element fully in one direction and back to the starting point.

— *Measure the force without flowing water at the end of the previous test which shall remain in the range of 15 N to 75 N.*

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, with the exception of a trigger, the “closed” position shall be clearly identified by visual and/or haptical means.

Verification

Visual inspection.

4.2.3 Flow adjustment positions

If a branchpipe has a device to select flow rate, 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 maximum 180°.

Verification

Visual inspection and functional test (actuation).

4.2.4 Jet spray angles and adjustment positions

The various jet positions shall be clearly marked.

Verification

Visual inspection.

The narrow spray jet position 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 between 70° and maximum 180°.

NOTE For branchpipes with flow less than or equal to 500 l/min, this requirement is included in the 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 a 180° rotation (one hand twist movement).

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

Verification

A narrow spray jet position between straight jet and wide spray jet positions shall be provided on the branchpipe.

The narrow spray jet shall have a spray angle of at least 30°.

Arrange the branchpipe 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 (see Figure 1). Set the branchpipe at the maximum flow rate position.

Arrange vertically a rule in the longitudinal axis of the extremity of the branchpipe at a distance of 1 m. This rule, with a height of 3 m, shall have three coloured zones symmetrically arranged on both sides of the longitudinal axis.

The outside diameters of the zones are defined in the Table 3.