



SLOVENSKI STANDARD
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**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: prEN 15182-4

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13.220.10	Gašenje požara	Fire-fighting
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English Version

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

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

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 192.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 15182-4:2018) has been prepared by Technical Committee CEN/TC 192 “Fire and Rescue Service Equipment”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede 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;
- addition of new type 5 (automatic flow branchpipe);
- 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.

<https://standards.iteh.ai/catalog/standards/sist/db1678f7-a7ca-4dfa-adc2-d55268afa023/sist-en-15182-4-2019>

1 Scope

In addition to the requirements given in EN 15182-1:¹⁾, this document applies to hand-held high pressure branchpipes (nozzles) 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 15182-1:¹⁾.

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 15182-1:¹⁾, *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 15182-1:¹⁾ 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 corresponding to the following definitions

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

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

¹⁾ Under preparation. Stage at the time of publication: prEN 15182-1:2018.

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

3.1.5

combination branchpipe – type 5 (automatic flow branchpipes)

combination branchpipe with integrated flow control device

Note 1 to entry: Changing pattern does not change the flow within a range of pressures.

3.2

jet

3.2.1

narrow spray jet

intermediate position between the straight jet and the wide spray jet providing both throw and 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 and verification

4.1 General

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

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 N·m
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 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 4.

Table 3 — Outside diameter of the zones

<i>Colour of the zone</i>	<i>Outside diameter m</i>	<i>Angle</i>
<i>Black (b)</i>	<i>0,54</i>	<i>< 30 °</i>
<i>Grey (c)</i>	<i>2,38</i>	<i>30 ° to 100 °</i>
<i>White</i>	<i>Beyond</i>	<i>> 100 °</i>

Check that the coloured zones are covered according to the following requirements:

- *narrow spray jet position: grey zone shall be reached by the jet and the white zone shall not be reached by the jet;*
- *maximum spray jet position: white zone shall be reached by the jet.*

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