BS EN 16712-2:2015

BSI Standards Publication

Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable foam equipment

Part 2: Pick-up tubes

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of EN 16712-2:2015.

The UK participation in its preparation was entrusted to Technical Committee FSH/17, Fire brigade equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2015

ISBN 978 0 580 85150 6

ICS 13.220.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2015.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16712-2

September 2015

ICS 13.220.10

English Version

Portable equipment for projecting extinguishing agents supplied by fire fighting pumps - Portable foam equipment - Part 2: Pick-up tubes

Equipement portable de projection d'agents d'extinction alimenté par des pompes à usage incendie - Equipements mousse portables - Partie 2 : Flexibles d'aspiration

Tragbare Geräte zum Ausbringen von Löschmitteln, die mit Feuerlöschpumpen gefördert werden - Tragbare Schaumgeräte - Teil 2: Ansaugschlauch

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

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword

This document (EN 16712-2:2015) 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of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.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.

1 Scope

1.1 This European Standard specifies performance requirements and test methods for pick-up tubes.

This European Standard applies to pick-up tubes from DN 20 to DN 50 which are used for the suction of foam concentrate or additives and defines their requirements and test procedures.

Pick-up tubes are especially used with inductors in accordance with EN 16712-1.

NOTE Pick-up tubes can also be used for the suction of other substances (e.g. absorbents).

1.2 This European Standard is not applicable to pick-up tubes 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
pick-up tube
device through which foam concentrate, additives or other substances are transferred from a reservoir to an inductor or other proportioning device

3 Designation

The designation of pick-up tubes in compliance with EN 16712-2 comprises

— name of the equipment,

— reference to EN 16712-2,

— nominal diameter,

— total length.

EXAMPLE A pick-up tube with a nominal diameter of 38 mm and a total length of 1 500 mm is designated as follows:

Pick-up tube EN 16712–2 — DN 38 – 1 500

4 Requirements

4.1 Components, dimensions and mass

The pick-up tube consists of a semi-rigid transparent tube connectable at one end to the foam concentrate inlet of an inductor or proportioning device (see Figure 1). At the other end, it should remain free or be equipped with

— a riser metallic or plastic pipe, or

— a strainer, with or without foot valve, or

— a coupling, or

— any combinations of the above elements.

It is recommended that the length of the flexible section (semi rigid translucent tube) and of the rigid section (riser pipe) be specified by the user/purchaser to meet their specific requirements.

NOTE Riser pipes have proved to be more advantageous than a free tube end because their mass helps avoid the pick-up tube slipping out of the foam concentrate or additive container.

The above elements should take into account the total length indicated in Table 2 and shall not reduce the performance of the inductor or proportioning device, e.g. by a smooth internal surface of the semi rigid tube.

The nominal diameters shall be in accordance with Table 1.

Table 1 — Nominal diameters

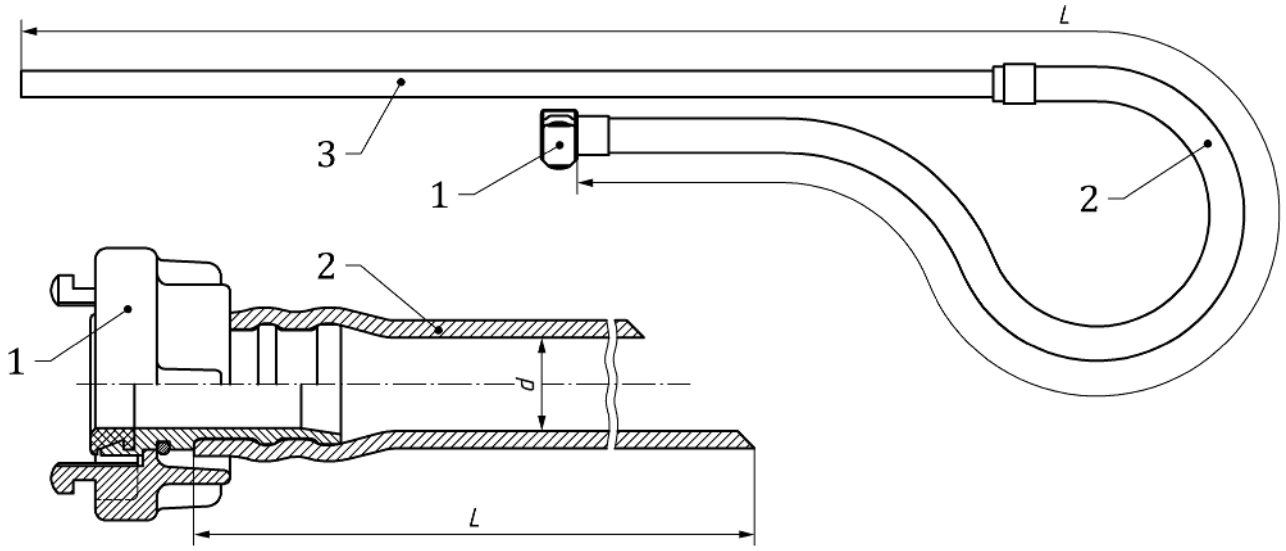
Nominal flow rate of proportioning or inducting device	**DN**
≤ 800 l/min	≥ 20 mm
> 800 l/min to ≤ 2 000 l/min	25 mm to 38 mm
> 2 000 l/min	≥ 38 mm

Dimensions and mass of pick-up tubes DN 20 shall be in accordance with Table 2 and Figure 1. For pick-up tubes larger than DN 20 dimensions and mass shall be agreed between the manufacturer and the user.

Table 2 — Total length and maximum mass of pick-up tube DN 20

Pick-up tube DN 20	**Total length (*L*)** mm	**Maximum mass** kg
Pick-up tube EN 16712–2 — DN 20 - 1 500	1 500 ± 50	1
Pick-up tube EN 16712–2 — DN 20 - 2 500	2 500 ± 50	2

Dimensions in millimetres



Key

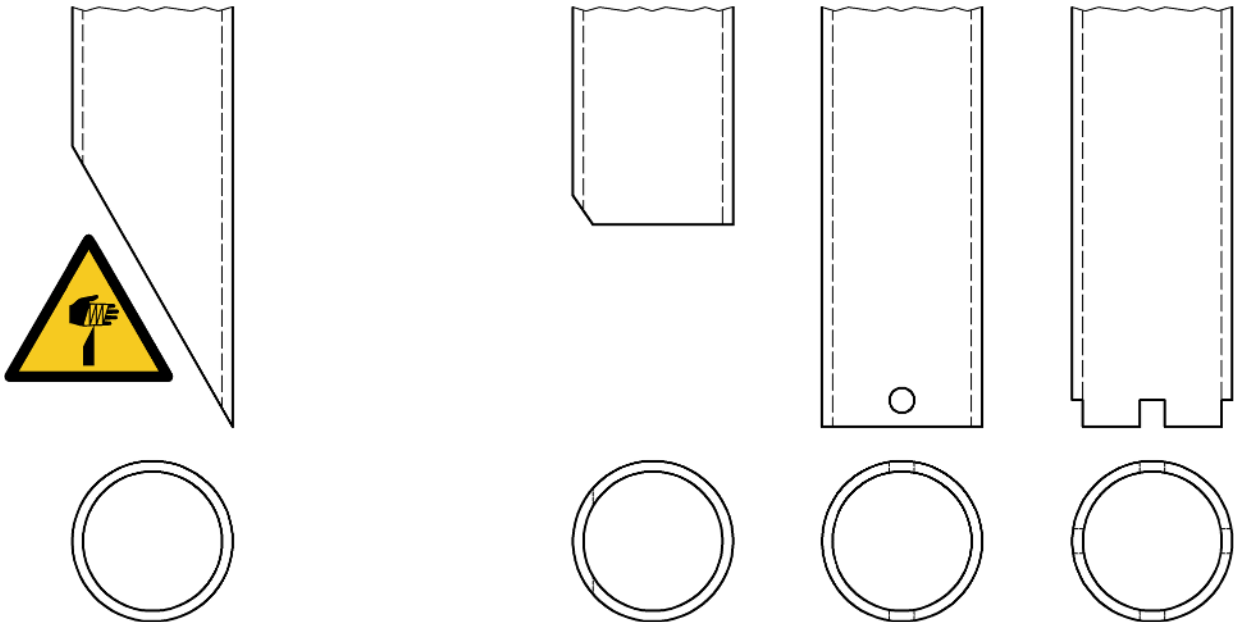
1 connection to inductor or proportioning device
2 semi rigid translucent tube
3 riser pipe
d nominal diameter
L total length

Figure 1 — Dimensions of a pick-up tube

Verification

Measurement of dimensions and mass.

The riser pipe end shall not be cut at sharp angle (see Figure 2, a)) to avoid injury to the user. Examples of permitted riser ends are given in Figure 2, b)).



Symbol = ISO 7010-W022

a) Riser pipe end not permitted **b) Examples of permitted riser pipe ends**

Figure 2 — Riser pipe end

Verification

Visual inspection.

4.2 Material

The semi rigid tube shall be made of thermoplastic material, optionally with reinforcement (e.g. spiral wire or fibre reinforced).

The material of the tube shall be translucent in order to view the presence of the foam concentrate or additive inside the semi rigid tube and/or flow disturbances.

Verification

Visual inspection and supplier material certificate.

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

The pick-up tube should be UV-resistant.

Verification

Material certificates.

4.3 Connection to the inductor/proportioning device

The wall thickness shall be selected in such a way that the tube is permanently fixed to the coupling.

A tube clamp or other convenient binding mechanism is permitted. A suitable permanent adhesive may be used.

Verification

The tube shall be attached to the connector in such a way that its position on the connector does not change.

On the tube heated up to a temperature of (55 ± 3) °C, a traction force of (100 ± 5) N is applied for 15 s to the coupling-free end of the tube.

After 15 s, check by visual inspection that the position of the tube on the connector has not moved.

4.4 Tightness

During a one-minute test, the pressure shall not change.

Verification

At room temperature (23 ± 5) °C, a pressure of (- 0,8 ± 0,1) bar shall be maintained inside the tube for 15 s.

Check that the pressure does not deviate more than 0,1 bar.

4.5 Cross section

During the test below, the outer diameter of the semi rigid tube shall not be more than 20 % smaller at any point, when compared to the original outer diameter.

Verification

The diameter of the semi rigid tube shall be measured after 15 s at a temperature of 55 °C and a pressure of - 0,8 bar.

4.6 Collapsing

During the test below, the semi rigid tube shall not collapse.

Verification

The semi rigid tube, cooled down to a temperature of (-15 ± 2) °C for 30 min, is bent by 180° with a bending inside diameter of DN x 10. Check by visual inspection that the semi rigid tube does not collapse.

Bibliography

[1] EN 1568-1, *Fire extinguishing media — Foam concentrates — Part 1: Specification for medium expansion foam concentrates for surface application to water-immiscible liquids*

[2] EN 1568-2, *Fire extinguishing media — Foam concentrates — Part 2: Specification for high expansion foam concentrates for surface application to water-immiscible liquids*

[3] EN 1568-3, *Fire extinguishing media — Foam concentrates — Part 3: Specification for low expansion foam concentrates for surface application to water-immiscible liquids*

[4] EN 1568-4, *Fire extinguishing media — Foam concentrates — Part 4: Specification for low expansion foam concentrates for surface application to water-miscible liquids*

[5] EN 16712-1, *Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable foam equipment — Part 1: Inductors PN 16*

[6] EN ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs (ISO 7010)*

This page deliberately left blank

This page deliberately left blank

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards -based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email bsmusales@bsigroup.com.

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Copyright

Useful Contacts:

Customer Services
Tel: +44 845 086 9001
Email (orders): orders@bsigroup.com
Email (enquiries): cservices@bsigroup.com

Subscriptions
Tel: +44 845 086 9001
Email: subscriptions@bsigroup.com

Knowledge Centre
Tel: +44 20 8996 7004
Email: knowledgecentre@bsigroup.com

Copyright & Licensing
Tel: +44 20 8996 7070
Email: copyright@bsigroup.com

bsi.

...making excellence a habit.™