

SVENSK STANDARD

SS-EN 671-2:2012

Fastställt/Approved: 2012-04-20
Publicerad/Published: 2012-04-25
Utgåva/Edition: 2
Språk/Language: engelska/English
ICS: 13.220.10; 13.220.20

Brand och räddning – Fasta släcksystem – Del 2: Inomhusbrandposter med flatrullad slang

Fixed firefighting systems – Hose systems – Part 2: Hose systems with lay-flat hose

This preview is downloaded from www.sis.se. Buy the entire standard via <https://www.sis.se/std-86139>

Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

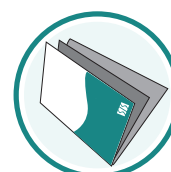
Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Europastandarden EN 671-2:2012 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 671-2:2012.

Denna standard ersätter SS-EN 671-2, utgåva 1 och SS-EN 671-2/A1:2004, utgåva 1.

The European Standard EN 671-2:2012 has the status of a Swedish Standard. This document contains the official version of EN 671-2:2012.

This standard supersedes the Swedish Standard SS-EN 671-2, edition 1 and SS-EN 671-2/A1:2004, edition 1.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Uppllysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna uppllysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Fasta släckmedel, Sprinkler och Gasläcksystem, SIS/TK 360/AG 3.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

EN 671-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2012

ICS 13.220.10

Supersedes EN 671-2:2001

English Version

Fixed firefighting systems - Hose systems - Part 2: Hose systems with lay-flat hose

Installations fixes de lutte contre l'incendie - Systèmes équipés de tuyaux - Partie 2: Postes d'eau muraux équipés de tuyaux plats

Ortsfeste Löschanlagen - Wandhydranten - Teil 2: Wandhydranten mit Flachschauch

This European Standard was approved by CEN on 9 March 2012.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	4
Introduction	5
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Requirements	6
4.1 General.....	6
4.2 Distribution of extinguishing media	7
4.2.1 Hose bore	7
4.2.2 Minimum flow rate	7
4.2.3 Effective throw range	7
4.2.4 Spray discharge	7
4.3 Operational reliability	7
4.3.1 Hose — General	7
4.3.2 Shut-off nozzle	8
4.3.3 Shut-off nozzle — Resistance to impact	8
4.3.4 Shut-off nozzle — Operating torque	8
4.3.5 Inlet stop valve	8
4.3.6 Hydraulic properties — Resistance to internal pressure	9
4.3.7 Hydraulic properties — Security of couplings	9
4.4 Ability to pull out the hose.....	9
4.4.1 Type 1 Reel	9
4.4.2 Type 1 and 3 Supports swinging.....	9
4.4.3 Hose — Maximum length	9
4.5 Colour	9
4.6 Cabinet.....	9
4.6.1 General.....	9
4.6.2 Opening/closing device	10
4.6.3 Cabinet for manual hose system with screw down type valve.....	10
4.6.4 Identification symbol	10
4.7 Durability aspects	10
4.7.1 Durability of operational reliability.....	10
5 Test methods.....	10
5.1 General.....	10
5.2 Distribution of extinguishing media	11
5.2.1 Hose bore	11
5.2.2 Minimum flow rate	11
5.2.3 Effective throw range	11
5.2.4 Spray discharge	11
5.3 Operational reliability	11
5.3.1 Hose — General	11
5.3.2 Shut-off nozzle	11
5.3.3 Shut-off nozzle — Resistance to impact	11
5.3.4 Shut-off nozzle — Operating torque	11
5.3.5 Inlet stop valve	11
5.3.6 Hydraulic properties — Resistance to internal pressure	11
5.3.7 Hydraulic properties — Security of couplings	12
5.4 Ability to pull out the hose.....	12
5.4.1 Type 1 Reel	12

5.4.2	Type 1 and Type 3 Supports swinging.....	12
5.4.3	Hose — Maximum length.....	12
5.5	Colour.....	12
5.6	Cabinet.....	12
5.7	Durability aspects.....	12
5.7.1	Durability of operational reliability	12
6	Evaluation of conformity	13
6.1	General	13
6.2	Initial Type Testing — Type Testing	13
6.2.1	General	13
6.2.2	Test samples.....	14
6.2.3	Test reports	14
6.3	Factory Production Control (FPC)	14
6.3.1	General	14
6.3.2	Requirements.....	14
6.3.3	Product specific requirements.....	16
6.3.4	Initial inspection of factory and of FPC.....	17
6.3.5	Continuous surveillance of FPC	18
6.3.6	Procedure for modifications.....	18
6.3.7	One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity	18
7	Marking.....	19
8	Instruction	19
8.1	Instructions for use	19
8.2	Installation and maintenance instructions	20
Annex A (normative) Schedule for testing sequence		21
Annex B (normative) Test method for resistance to external corrosion		22
Annex C (normative) Ageing test for plastics materials.....		23
Annex D (normative) Test method for resistance to corrosion of waterways.....		24
Annex E (normative) Test methods for shut-off nozzle		25
E.1	Resistance to impact.....	25
E.2	Operating torque	25
E.3	Spray discharge.....	25
E.4	Flow rate and throw range.....	27
E.4.1	Flow rate.....	27
E.4.2	Throw range	28
Annex F (normative) Test method for resistance to internal pressure		29
Annex ZA (informative) Clauses of this European Standard addressing the provisions of EU Construction Products Directive		30
ZA.1	Scope and relevant characteristics	30
ZA.2	Procedure for the attestation of conformity of hose systems with lay-flat hose	32
ZA.2.1	System of attestation of conformity	32
ZA.2.2	EC certificate of conformity.....	34
ZA.3	CE marking and labelling.....	34

SS-EN 671-2:2012 (E)

Foreword

This document (EN 671-2:2012) has been prepared by Technical Committee CEN/TC 191 “Fixed firefighting systems”, the secretariat of which is held by BSI.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2012 and conflicting national standards shall be withdrawn at the latest by January 2014.

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 supersedes EN 671-2:2001.

EN 671-2:2001 has been technically revised and editorially edited. The order of clauses has been changed. Annex ZA has been updated.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

For convenience of application in testing, the normative annexes of this European Standard are arranged so that Annex A gives the sequence of testing for conformity assessment and Annexes B, C, D, E and F are in the correct sequence for testing.

EN 671 has the general title “Fixed firefighting systems — Hose systems” and is in three parts:

- *Part 1: Hose reels with semi-rigid hose;*
- *Part 2: Hose systems with lay-flat hose;*
- *Part 3: Maintenance of hose reels with semi-rigid hose and hose systems with lay-flat hose.*

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, 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.

Introduction

Fire hose systems in proper condition provide a very effective firefighting facility with a continuous supply of water available immediately.

The requirements of this European Standard have been specified to ensure that hose system can be operated efficiently by one person and that such systems have a long service life.

1 Scope

This European Standard specifies requirements and methods of test for the construction and performance of fire hose reel systems with lay-flat hose for installation in buildings, permanently connected to a water supply, for use by the occupants.

Furthermore, it provides also for requirements on evaluation of conformity and marking of these products.

Its requirements may apply in general for other applications, for example in marine applications or in aggressive environments, but additional requirements may be necessary in such cases.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 671-3, *Fixed firefighting systems — Hose systems — Part 3: Maintenance of hose reels with semi-rigid hose and hose systems with lay-flat hose*

EN 14540, *Fire-fighting hoses — Non-percolating layflat hoses for fixed systems*

EN ISO 4892-2:2006, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc amps (ISO 4892-2:2006)*

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

EN ISO 9227:2006, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2006)*

ISO 5208, *Industrial valves — Pressure testing of metallic valves*

ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

SS-EN 671-2:2012 (E)

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

- 3.1 cabinet**
box to protect the hose system against environmental or physical damage
- 3.2 coupling**
device used to connect the hose to the valve and to the shut-off nozzle
- 3.3 fire hose system; hose system**
firefighting appliance consisting essentially of a cabinet or cover, hose support, manual stop valve, lay-flat hose with couplings, shut-off nozzle
- 3.4 hose support**
device used to hold the hose and shall be one of the following types:
- Type 1: rotating reel;
 - Type 2: cradle with the hose double coiled;
 - Type 3: hose basket with the hose flaked
- 3.5 lay-flat hose**
hose which is flat-sectioned except when it is internally pressurized
- 3.6 maximum working pressure**
maximum allowable pressure for which the hose system is designed
- Note 1 to entry: All pressures are gauge pressures and are expressed in Mega Pascal (1 MPa = 10 bar).
- [SOURCE: EN 671-1:2012]
- 3.7 shut-off nozzle**
component, at the end of the hose, used to direct and control the discharge of water

[SOURCE: EN 671-1:2012]

4 Requirements

4.1 General

Conformity with the requirements given in this Clause 4 shall be verified by testing in accordance with Clause 5.

4.2 Distribution of extinguishing media

4.2.1 Hose bore

The inside diameter of the hose shall be maximum 52 mm.

4.2.2 Minimum flow rate

The flow rates in jet and spray settings shall be according to Table 1.

Table 1 — Minimum flow rates and minimum *K*-coefficient according to pressure

Nozzle- or equivalent diameter mm	Minimum flow rate <i>Q</i> l/min			<i>K</i> -coefficient ^a
	<i>P</i> = 0,2 MPa	<i>P</i> = 0,4 MPa	<i>P</i> = 0,6 MPa	
9	65	92	113	46
10	78	110	135	55
11	96	136	167	68
12	102	144	176	72
13	120	170	208	85

^a Flow rate *Q* at a pressure *P* is related to the equation $Q = K\sqrt{10P}$, where *Q* is in l/min and *P* is in MPa.

4.2.3 Effective throw range

The effective throw ranges of the discharges at a pressure of 0,2 MPa shall not be less than as follows (as appropriate):

- a) jet discharge: 10 m;
- b) sheet spray discharge: 6 m;
- c) conical spray discharge: 3 m.

4.2.4 Spray discharge

Nozzles with a spray setting shall give a spray angle as follows:

- a) sheet spray: $90^\circ \pm 5^\circ$;
- b) conical spray: not less than 45° .

4.3 Operational reliability

4.3.1 Hose — General

The hose shall be lay-flat and according to EN 14540.