

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1113

April 2015

ICS 23.040.70; 91.140.70

Supersedes EN 1113:2008+A1:2011

English Version

**Sanitary tapware - Shower hoses for sanitary tapware for water
supply systems of type 1 and type 2 - General technical
specification**

Robinetterie sanitaire - Flexibles de douches pour
robinetterie sanitaire pour les systèmes d'alimentation type
1 et type 2 - Spécifications techniques générales

Sanitärarmaturen - Brauseschläuche für Sanitärarmaturen
für Wasserversorgungssysteme vom Typ 1 und Typ 2 -
Allgemeine technische Spezifikation

This European Standard was approved by CEN on 12 March 2015.

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, 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 United Kingdom.



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

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

Contents

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	9
3 Terms and definitions	9
4 Designation	9
5 Marking	9
6 Materials	9
6.1 Chemical and hygienic requirements	9
6.2 Exposed surface condition and quality of coating	10
7 Dimensional characteristics	10
7.1 General.....	10
7.2 Connecting dimensions	10
7.3 Special cases	11
8 Hydraulic characteristics	11
8.1 General.....	11
8.2 Flow rate	12
8.2.1 Test method.....	12
8.2.2 Principle	12
8.2.3 Apparatus	12
8.2.4 Procedure	12
8.2.5 Requirements	12
9 Mechanical and leaktightness characteristics	14
9.1 General.....	14
9.2 Tensile strength	14
9.2.1 Test method.....	14
9.2.2 Principle.....	14
9.2.3 Apparatus	14
9.2.4 Procedure	15
9.2.5 Requirements	15
9.3 Resistance to flexing	15
9.3.1 Test Method.....	15
9.3.2 Principle.....	15
9.3.3 Apparatus	15
9.3.4 Procedure	17
9.3.5 Requirement.....	17
9.4 Pressure resistance at elevated temperature	17
9.4.1 Test method.....	17
9.4.2 Principle.....	17
9.4.3 Apparatus	18
9.4.4 Procedure	18
9.4.5 Requirements	19
9.5 Leaktightness after tensile strength and resistance to flexing tests	19
9.5.1 Test method.....	19
9.5.2 Principle.....	19

9.5.3	Apparatus	19
9.5.4	Procedure	19
9.5.5	Requirements	19
9.6	Thermal shock test	19
9.6.1	Test method	19
9.6.2	Principle	19
9.6.3	Apparatus	19
9.6.4	Procedure	20
9.6.5	Requirements	20
10	Rotary connection	20
10.1	General	20
10.2	Test Method	21
10.2.1	Principle	21
10.2.2	Apparatus	21
10.2.3	Procedure	21
10.2.4	Requirement	22
	Bibliography	23

Foreword

This document (EN 1113:2015) has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

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 October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

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 1113:2008+A1:2011.

The main change to this standard is the introduction of 2 classes for hoses for supply systems of type 1. See Table 1 and Table 3.

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.

Introduction

In respect of potential adverse effects on the quality of water intended for human consumption caused by the product covered by this European Standard:

- This European Standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA.
- While awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

1 Scope

This European Standard specifies:

- the dimensional, leaktightness, mechanical and hydraulic characteristics with which shower hoses should comply;
- the procedures for testing these characteristics.

This European Standard applies to shower hoses of any material used for ablutionary purposes and intended for equipping and supplementing sanitary tapware for baths and showers.

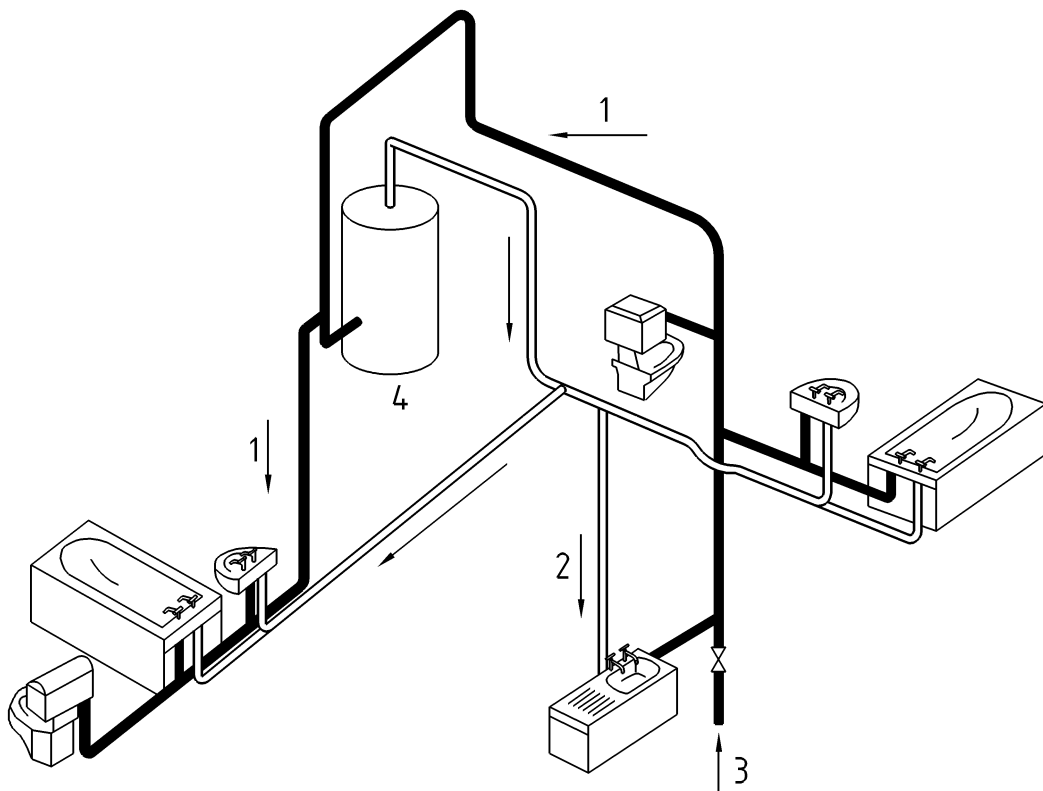
This European Standard applies to shower hoses connected downstream of the obturator of the tapware.

Hoses which are an integral part of sanitary tapware (sink and wash basin mixing valves) or hoses intended to connect sanitary tapware to the water supplies are not covered by this European Standard.

Details of pressures and temperatures are given in Table 1.

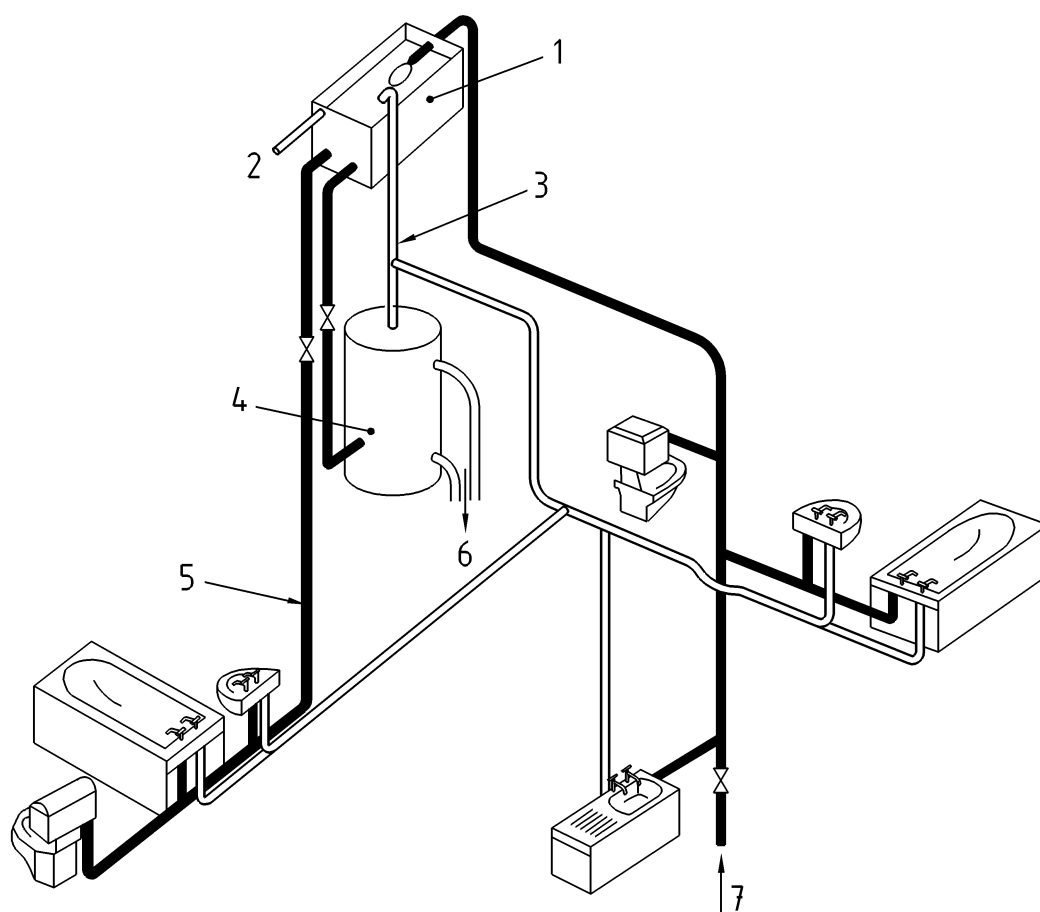
Table 1 — Conditions of use/Classifications

Water Supply system	Operating range of shower hoses		Flow rates
	Limits	Recommended	See Table 3
Type 1 see Figure 1	<u>Dynamic Pressure</u> (0,05 to 0,5) MPa [(0,5 to 5) bar]	<u>Dynamic Pressure</u> (0,1 to 0,3) MPa [(1,0 to 3,0) bar]	Class 1 0,42 l/s ≤ Q (25,2 l/min ≤ Q) at (0,3 ₀ ^{+0,02}) MPa [(3 ₀ ^{+0,2}) bar]
			Class 2 0,20 l/s ≤ Q < 0,42 l/s (12 l/min ≤ Q < 25,2 l/min) at (0,3 ₀ ^{+0,02}) MPa [(3 ₀ ^{+0,2}) bar]
Type 2 see Figure 2	<u>Dynamic Pressure</u> (0,01 to 0,2) MPa [(0,1 to 2) bar]	<u>Dynamic Pressure</u> (0,02 to 0,10) MPa [(0,2 to 1,0) bar]	Class E 0,06 l/s < Q < 0,18 l/s (3,6 l/min < Q < 10,8 l/min.) at (0,01 ₀ ^{+0,0005}) MPa [(0,1 ₀ ^{+0,005}) bar]
			Class H 0,18 l/s ≤ Q (10,8 l/min ≤ Q) at (0,01 ₀ ^{+0,0005}) MPa [(0,1 ₀ ^{+0,005}) bar]
Temperature	T ≤ 70°C	T ≤ 42°C	

**Key**

- 1 cold water
- 2 hot Water
- 3 mains supply pipe (Supply pressures up to 10 bar)
- 4 water heater

Figure 1 — Type 1 Water supply system with a pressure range of (0,05 – 1,0) MPa [(0,5 - 10) bar]

**Key**

- 1 cold water storage cistern (cover omitted for clarity)
- 2 warning pipe
- 3 vent pipe
- 4 hot water cylinder
- 5 alternative cistern fed cold supply to sanitary appliances
- 6 to boiler
- 7 mains supply pipe (Supply pressures up to 10 bar)

**Figure 2 — Type 2 Water supply system - with a pressure range of (0,01 – 1,0) MPa, [(0,1 - 10) bar].
A vented domestic hot water and cold water supply system incorporating gravity hot water, mains cold water and alternative gravity cold water supply to sanitary appliances**

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 248, *Sanitary tapware — General specification for electrodeposited coatings of Ni-Cr*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN