
Ventili v stavbah - Zaporni ventili iz bakrovih zlitin za pitno vodo v stavbah - Preskušanje in zahteve

Building valves - Copper alloy stopvalves for potable water supply in buildings - Tests and requirements

Gebäudearmaturen - Absperrventile aus Kupferlegierungen für Trinkwasseranlagen in Gebäuden - Prüfungen und Anforderungen

Robinetterie de bâtiment - Robinets d'arrêt à soupape en alliage de cuivre pour la distribution d'eau potable dans le bâtiment - Essais et prescriptions

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Ta slovenski standard je istoveten z: EN 1213:1999

ICS:

23.060.20	Zapirni ventili (kroglasti in pipe)	Ball and plug valves
91.140.60	Sistemi za oskrbo z vodo	Water supply systems

SIST EN 1213:2000**en**

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EUROPEAN STANDARD

EN 1213

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1999

ICS 23.060.20; 91.140.60

English version

Building valves - Copper alloy stopvalves for potable water supply in buildings - Tests and requirements

Robinetterie de bâtiment - Robinets d'arrêt à soupape en alliage de cuivre pour la distribution d'eau potable dans le bâtiment - Essais et prescriptions

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This European Standard was approved by CEN on 5 September 1999.

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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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
Foreword	3
Introduction.....	4
1 Scope.....	4
2 Normative references.....	5
3 Definition.....	5
4 Classification	7
4.1 General.....	7
4.2 The nominal size (DN).....	7
4.3 The flow rate.....	7
4.4 The end connections:	7
5 Designation.....	9
6 Materials.....	9
6.1 Chemical and hygienic characteristics.....	9
6.2 Body materials.....	9
7 Tests and requirements	10
7.1 General.....	10
7.2 Mechanical requirements and tests.....	10
7.3 Hydraulic tests and requirements.....	13
7.4 Acoustic tests and requirements	16
7.5 Endurance Test.....	16
8 Design requirements.....	18
9 Marking.....	18



Foreword

This European Standard 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 April 2000, and conflicting national standards shall be withdrawn at the latest by April 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

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

- 1) This 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;
- 2) It should be noted that, while awaiting the adoption of the verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

1 Scope

The purpose of this Standard EN 1213 is to specify:

- the requirements for the materials and the design of stopvalves,
- the mechanical, hydraulic and acoustic requirements,
- the test methods,
- the marking requirements.

for copper alloy stopvalves for use with drinking water supply in buildings.

This standard applies primarily to copper alloy stopvalves, dimensions DN 10 to DN 100, for potable water supply in buildings up to PN 10 and a distribution temperature of 65 °C. Occasional excursions up to 95 °C are permitted for a period of 1 h maximum.

Other metallic materials can be used if it can be verified that they are suitable for the application.

This standard applies also to stopvalves in combination with accessories in the same body.

This standard does not apply to regulating or servicing valves, designed specially to isolate sanitary tapware or other sanitary appliances.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 200	Sanitary tapware - General technical specifications for single taps and mixer taps (nominal size 1/2) PN10 - Minimum flow pressure of 0,05 Mpa (0,5 bar)
EN 1254-1	Copper and copper alloys - Plumbing Fittings - Part 1: Fittings with ends for capillary soldering or capillary brazing to copper tubes.
EN 1254-2	Copper and copper alloys - Plumbing Fittings - Part 2: Fittings with compression ends for use with copper tube.
EN 1254-3	Copper and copper alloys - Plumbing Fittings - Part 3: Fittings with compression ends for use with plastics pipe.
EN 1982	Copper and copper alloys - Ingots and castings
prEN 10255	Carbon steel tubes suitable for welding or threading.
EN 12420	Copper and copper alloys - Forgings
EN ISO 3822-1	Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 1 Method of Measurement. (ISO 3822-1: 1999)
EN ISO 3822-3	Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 3: Mounting and operating conditions for in-line valves and appliances. (ISO 3822-3: 1997)
EN ISO 6509	Corrosion of metals and alloys – Determination of dezincification resistance of brass (ISO 6509 : 1981)
ISO 7-1	Pipe threads where pressure-tight joints are made on the threads - Part 1 Dimensions, tolerances and designation.
ISO 228-1	Pipe threads where pressure-tight joints are not made on the threads - Part 1 Dimensions, tolerances and designation.

3 Definition

For the purposes of this standard, the following definition applies:

Stopvalve: Valve in which the manually operated obturator moves in a straight line and, in the seating area, longitudinally against the direction of flow. It ensures the complete prevention of flow in a water pipe.

The following patterns are covered:

- Straight pattern stopvalves (See figure 1)
- Angle pattern stopvalves (See figure 2)
- Oblique pattern stopvalves (See figure 3)

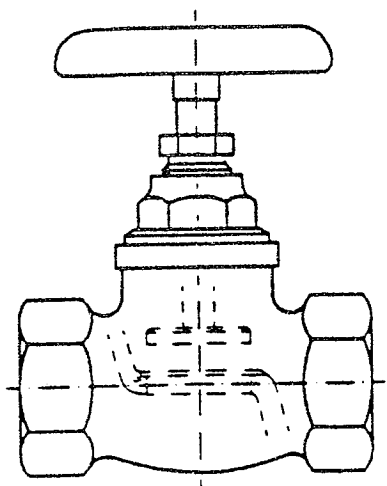


Figure 1: Straight pattern stopvalve

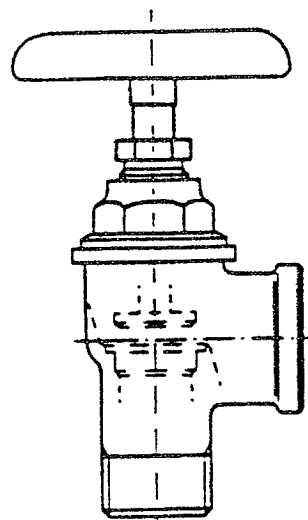


Figure 2: Angle pattern stopvalve

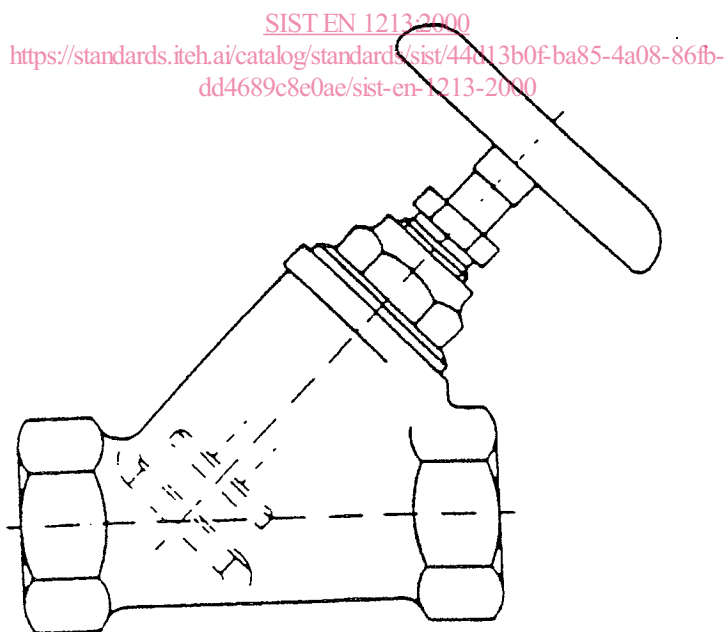


Figure 3: Oblique pattern stopvalve

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4 Classification

4.1 General

Stopvalves shall be classified by the nominal size (DN), the flow rate and the end connection.

4.2 The nominal size (DN)

The nominal sizes of stopvalves, which correspond to the flow rates, are indicated in table 7.

4.3 The flow rate

Flow Rate Class [s1]VA (straight and angle pattern stopvalves), and
Flow Rate Class VB (oblique pattern stopvalves)
according to table 7 in 7.3.3.

4.4 The end connections:

Typical end connections are defined in table 1.

Compression ends for use with plastics pipes are described in EN1254-3.

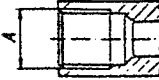
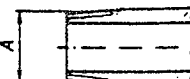
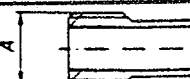
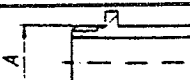
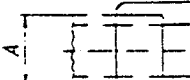


Other end connections are permitted provided their suitability is verified.

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Table 1: End connections and nominal sizes (DN)

Type	¹⁾	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
 a) Internal thread to ISO 7/1	A	Rp 3/8	Rp 1/2	Rp 3/4	Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 2	Rp 2 1/2	Rp 3	Rp 4
 b) External thread to ISO 7/1	A	R 3/8	R 1/2	R 3/4	R 1	R 1 1/4	R 1 1/2	R 2	R 2 1/2	R 3	R 4
 c) External thread to ISO 228/1	A	G1/2B	G3/4B	G1B	G1 1/4B	G1 1/2B	G1 1/2B G1 3/4B	G2B	G3B	G3 1/2B	-
 d) External thread with shoulder to ISO 228/1	A	G3/8B	G1/2B	G3/4B	G1B	G1 1/4B	G1 1/2B G1 3/4B	G2B G2 3/8B	G2 1/2B	G3B	G4B
 e) Capillary socket to EN 1254-1	A	12	15/18	22	28	35	42	54	76,1	88,9	108
 f) Male capillary end to EN 1254-1	A	12	15/18	22	28	35	42	54	76,1	88,9	108
 g) Compression end for copper pipe to EN 1254-2	A	12	15/18	22	28	35	42	54	76,1	88,9	108

¹⁾ reference dimension

5 Designation

The designation of a stopvalve comprises:

- its pattern and material
- its flow rate class
- its nominal size DN
- its end connections
- its acoustic group
- reference to this standard.

EXAMPLE:

Oblique pattern stopvalve of copper alloy, flow rate class VB, DN 25, with internal threads Rp 1 on both sides, acoustic group I, EN 1213.

6 Materials

6.1 Chemical and hygienic characteristics

All materials in contact with potable water shall not cause any deterioration in water intended for human consumption with regard to food quality, appearance, odour or taste.

Within the recommended limits given in paragraph 1, materials shall not be subject to any deterioration which might compromise the operation of the stopvalve.

Pressurised parts shall withstand the limits of use. Materials with inadequate corrosion resistance shall have additional protection.

6.2 Body materials

6.2.1. Copper alloys

Examples of suitable copper alloys are given in Table 2.

Table 2 - Examples of copper alloys

Material Designation		EN Standard
Symbol	Number	
CuSn 10-C	CC480K	EN1982
CuSn5Pb5Zn5-C	CC491K	EN1982
CuSn3Zn8Pb5-C	CC490K	EN1982
CuZn39Pb3	CW614N	EN 12420
CuZn40Pb2	CW617N	EN 12420