SLOVENSKI STANDARD
SIST EN 816:2017

01-oktober-2017

Nadomešča:
SIST EN 816:1997

Sanitarne armature - Samozaporne armature PN 10

Sanitary tapware - Automatic shut-off valves PN 10

Sanitärarmaturen - Selbstschlussarmaturen PN 10

Robinetterie sanitaire - Robinets à fermeture automatique PN 10

Ta slovenski standard je istoveten z: EN 816:2017

ICS:

23.060.01	Ventili na splošno	Valves in general
91.140.70	Sanitarne naprave	Sanitary installations

SIST EN 816:2017 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 816

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Supersedes EN 816:1996

English Version

Sanitary tapware - Automatic shut-off valves PN 10

Robinetterie sanitaire - Robinets à fermeture automatique PN 10

Sanitärarmaturen - Selbstschlussarmaturen PN 10

This European Standard was approved by CEN on 24 April 2017.

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

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European foreword

This document (EN 816:2017) 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of an identical text or by endorsement, at the latest by February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 816:1996.

The main changes compares to the previous edition are:

1) water saving criteria were introduced;

2) the entire structure of the standard was revised;

3) normative references have been updated;

4) editorial changes and have been made throughout the entire document;

5) figures were redrawn.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, 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 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 verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

1 Scope

This European Standard is applicable to single and mixer taps with automatic shut-off for use with sanitary appliances installed in washrooms.

It does not apply to urinal or WC flushing valves or valves which open automatically.

The purpose of this standard is to specify the marking, identification, chemical/hygiene, dimensional, leaktightness, pressure resistance, hydraulic, mechanical endurance, and acoustical characteristics of automatic shut-off tapware.

The tests described in all the standard are type tests (laboratory tests) and not quality control tests carried out during manufacture

The conditions of pressure and temperature given in Table 1 apply:

Table 1 — Conditions for the use of self-closing tapware

(The pressures given are flow pressures)

	Limits of use	Recommended limits of operation
Dynamic pressure	0,05 MPa (0,5 bar) min.	0,1 MPa ≤ *P* ≤ 0,5 Mpa (1 bar ≤ *P* ≤ 5 bar)
Static pressure	1 MPa (10 bar) max	–
Hot water temperature	Max ≤ 90 °C	55 °C ≤ T ≤ 65 °C
Cold water temperature	-	T ≤ 25 °C

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 246, *Sanitary tapware - General specifications for flow rate regulators*

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

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

EN 13618, *Flexible hose assemblies in drinking water installations - Functional requirements and test methods*

EN 13959, *Anti-pollution check valves - DN 6 to DN 250 inclusive family E, type A, B, C and D*

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)*

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)*

EN ISO 3822-2, *Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 2: Mounting and operating conditions for draw-off taps and mixing valves (ISO 3822-2)*

EN ISO 3822-4:1997, *Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 4: Mounting and operating conditions for special appliances (ISO 3822-4:1997)*

EN ISO 5167 (all parts), *Measurement of fluid flow by means of orifice plates, nozzles and venturi tubes inserted in circular cross section conduits running full (ISO 5167)*

3 Terms and definitions

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

3.1
automatic shut-off tapware
tapware in which opening is effected by operation of a device following which shut-off occurs automatically mechanical after a certain period or volume

Note 1 to entry: This period and /or volume may be adjustable by the manufacturer or installer.

4 Designation

An automatic shut-off tapware is designated according to Table 2:

Table 2 — Designation

Tapware	
Type of valve	Mechanical self-closing tap
Intended use	Basin, sink or shower
Nominal size	1/2, 3/4; male or female
Body	Single or multi-hole; visible, or concealed
Mounting method	Horizontal or vertical surfaces
Type of outlet	Fixed, moveable, spout, with or without flow rate regulator
Acoustic group and classification	Group I, or group II, or unclassified
Water saving properties	Yes / no
Flow rate class	Z, A, S, B, C, D
Reference to this European Standard	EN 816

EXAMPLE Mechanical self-closing basin tap 1/2 ‘’, single visible body, horizontal surface, fixed nozzle outlet, group I, class A EN 816.

5 Marking - Identification

5.1 Marking

Tapware complying with this standard shall be permanently and indelibly marked on the body with the manufacturer's name or identification mark, and if applicable, the acoustic group and flow rate class.

5.2 Identification

a) The control devices of single taps shall be identified by colour (for cold water by the colour blue; and for hot water, by the colour red) and/or letters and/or symbols.

b) The temperature control device for mixing taps shall be identified either by means of a scale and/or symbols and/or by colours (Cold water – blue and Hot water – red).

c) The direction of operation of the temperature control device of mixers shall be identified.

d) For taps with separate control devices, the cold water shall be on the right and the hot water on the left.

For water saving mixing tapware, appropriate information to installers and users shall be provided.

The manufacturer shall explain letters, symbols, etc. in case they decide to use them.

6 Materials

6.1 Chemical and hygienic characteristics

All materials coming into contact with water intended for human consumption shall present no health risk nor cause any change of the drinking water in terms of quality, appearances, smell or taste.

6.2 Exposed surface condition and quality of coating

Visible chrome plated surfaces and Ni-Cr coatings shall comply with the requirements of EN 248.

7 Backflow protection

Automatic shut-off tapware shall comply with the specification for hygiene and backflow protection in accordance with EN 1717. Check valves shall comply with EN 13959.

8 Dimensional characteristics

8.1 General

General comment on drawings:

The design and construction of components without defined dimensions permits various design solutions to be adopted by the manufacturer.

Special cases are covered in 8.9.

8.2 Tap with visible body for horizontal surfaces (see Figure 1 and Table 3)

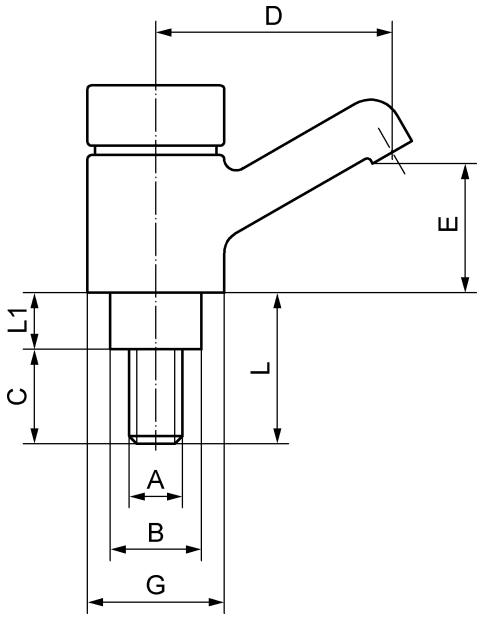

Figure 1 — Tap with visible body for horizontal surface

Table 3 — Dimensions

Values in millimetres

Dimension	Values	Comments
A	G 1/2 B	
B	29 max.	May be threaded
C	11 min.	
D	90 min.	Dimension from the centre of the outlet orifice with or without flow rate regulator as supplied
E	25 min.	Vertical distance from lowest point of the outlet orifice to the mounting surface of the tap
G	45 min.	Smallest dimension of the tap base
L and L1	Value which enables the tapware to be mounted on a support 1 mm to 18 mm in thickness and connection to the water supply	
	Note: Supply by flexible hose is permitted.	

8.3 Taps with visible body for mounting on vertical surfaces (see Figure 2 and Table 4)

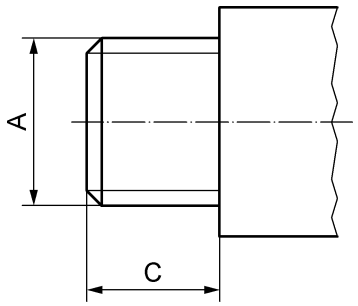

Figure 2 — Threaded inlets of taps with visible body for mounting on vertical surfaces

Table 4 — Dimensions of threaded inlets

Values in millimetres

Dimension	Values	
A	G 1/2 B	G 3/4 B
C	11 min.	13 min.

8.4 In-line tapware with threaded inlet and outlet

8.4.1 Inlets and outlets aligned (see Figure 3 and Table 5)

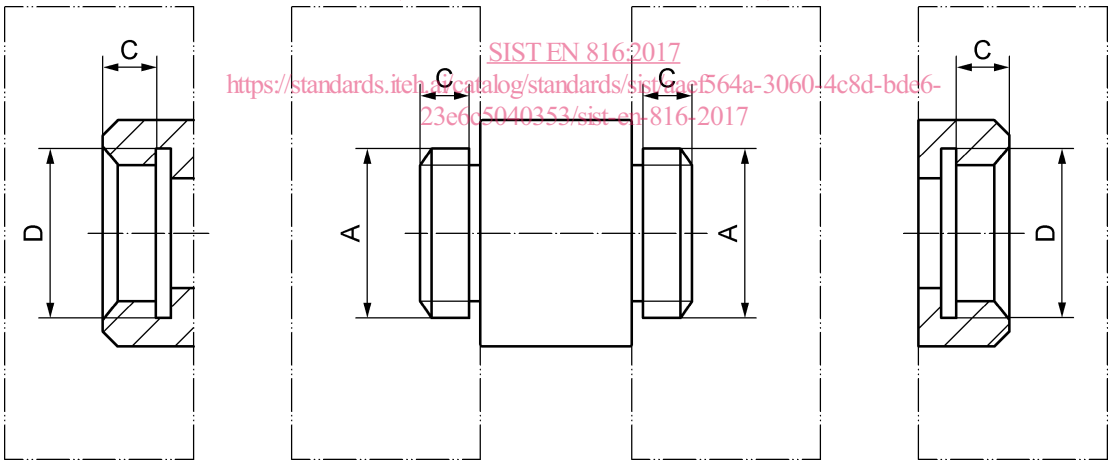

Figure 3 — Tapware with inlets and outlets aligned

8.4.2 Inlets and outlets at right angles (see Figure 4 and Table 5)

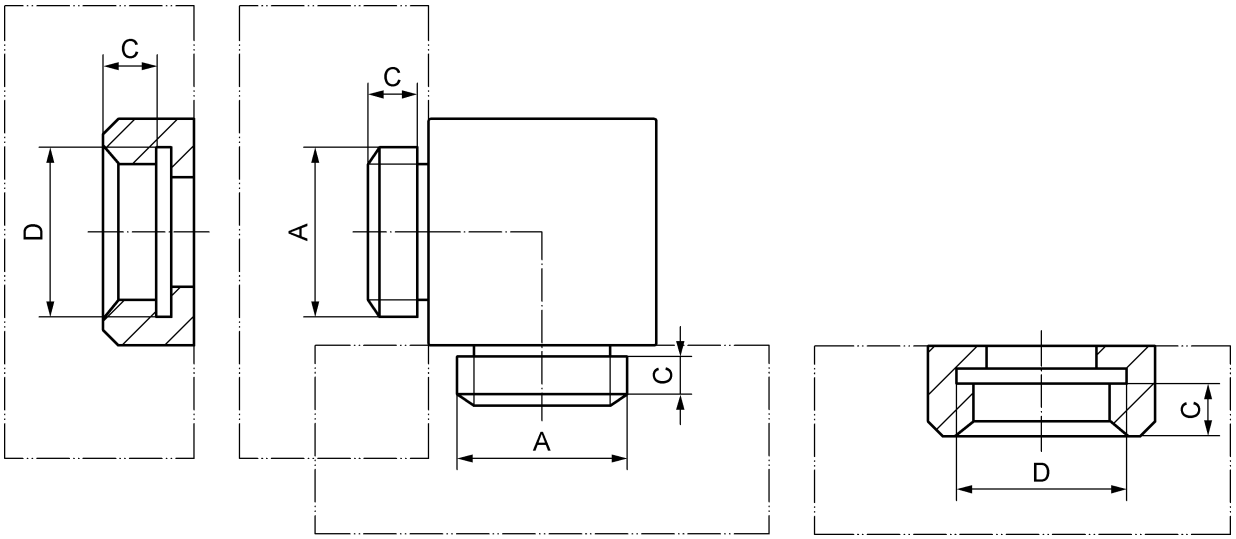

Figure 4 — Tapware with inlets and outlets at right angles

Table 5 — Dimensions of threads

Values in millimetres

Dimension	Values	
A	G 1/2 B	G 3/4 B
D	G 1/2	G 3/4
C	8 min.	10 min.
NOTE In the event of a different inlet and outlet size the nominal size is that of the inlet and the outlet size needs to be stated (e.g. In-line tapware G 1/2 B male with female outlet G 3/4 with inlet and outlet aligned).		

8.5 Concealed tapware for vertical surfaces

The dimensions of this type of tapware are left to the discretion of the manufacturer.