



**SLOVENSKI STANDARD**  
**SIST EN 816:1997**  
**01-september-1997**

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**Sanitarne armature - Samozaporne armature PN 10**

Sanitary tapware - Automatic shut-off valves PN 10

Sanitärarmaturen - Selbstschlußarmaturen PN 10

Robinetterie sanitaire - Robinets a fermeture automatique PN 10

**Ta slovenski standard je istoveten z: EN 816:1996**

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**ICS:**

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

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EUROPEAN STANDARD

EN 816

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 1996

ICS 23.060.00; 91.140.70

Descriptors: sanitary valves, cocks, mixing valves, designation, physicochemical properties, dimensions, leaktightness, pressure resistance, hydraulic properties, fatigue tests, wear resistance, acoustic properties, marking

English version

## Sanitary tapware - Automatic shut-off valves PN 10

Robinetterie sanitaire - Robinets à fermeture automatique PN 10

Sanitärarmaturen - Selbstschlußarmaturen PN 10

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

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

# CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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

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## 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of an identical text or by endorsement, at the latest by March 1997, and conflicting national standards shall be withdrawn at the latest by March 1997.

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

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## 0 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 following conditions of pressure and temperature apply :

**Table 1 : Conditions for the use of self closing tapware  
(The pressures given are flow pressures)**

	Limits of use	Recommended limits of operation
Minimum dynamic pressure	0,05 MPa (0,5 bar)	$0,1 \text{ MPa} \leq P \leq 0,5 \text{ MPa}$ ( $1 \text{ bar} \leq P \leq 5 \text{ bar}$ )
Maximum static pressure	1 MPa (10 bar)	–
Temperature	Max $\leq 90 \text{ }^\circ\text{C}$	Max $\leq 65 \text{ }^\circ\text{C}$

## 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 31	1977	Pedestal wash basins - Connecting dimensions
EN 32	1977	Wall hung wash basins - Connecting dimensions
EN 111	1984	Wall hung hand rinse basins - Connecting dimensions

EN 200	1989	Sanitary tapware : General technical specifications for single and mixer taps (nominal size 1/2) PN 10 minimum flow pressure 0.05 MPa (0,5 bar)
EN 246	1989	Sanitary tapware : General specifications for flow rate regulators
EN 248	1989	Sanitary tapware : General technical specification for electro-deposited nickel-chrome coatings
prEN 817		Sanitary tapware - Mechanical mixers (PN 10) - General technical specifications
prEN 1717		Protection against pollution of potable water in internal systems and general requirements for protective devices to prevent pollution by backflow
prEN ISO 3822-1		Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 1 : Method of measurement (ISO/DIS 3822-1:1995)
EN ISO 3822-2	1995	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 3822-2:1995)
prEN ISO 3822-4	1995	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 228-1	1994	Pipe threads where pressure - Tight joints are not made on the threads - Part 1 : Designation dimensions and tolerances
ISO 5167	1991	Measurement of fluid flow by means of orifice plates, nozzles and venturi tubes inserted in circular cross section conduits running full

### 3 Definition

For the purposes of this European Standard, the following definition applies :

**Automatic shut-off tapware:** tapware in which opening is effected by operation of a device following which shut-off occurs automatically after a certain period.

This period may be adjustable.

### 4 Designation

An automatic shut-off tap is designated by :

- its type (single or mixer) ;
- its nominal size : 1/2, 3/4, male or female ;
- reference to this standard (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, the acoustic group and flow rate class.

### 5.2 Identification

a) The control devices of taps shall be identified :

- for cold water, by the colour blue ;
- for hot water, by the colour red ;

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

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

## 6 Materials

### 6.1 Chemical and hygienic characteristics

All materials in contact with water intended for human consumption shall present no health risk up to a temperature of 90 °C.

They 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 clause 1 for correct operation the materials shall not be subjected to any deterioration which might compromise the operation of the tapware.

Pressurized parts shall withstand the limits of use set out in table 1.

Materials with inadequate corrosion resistance shall have additional protection.

### 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 Protection against pollution

Automatic shut-off tapware shall comply with the specification for hygiene and protection against pollution by backflow in accordance with prEN 1717.



## 8 Dimensional characteristics

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 8.8.

### 8.1 Tap with visible body for horizontal surfaces (see figure 1 and table 2)

The standardized dimensions of self closing tapware :

- firstly, guarantee their mounting and interchangeability on sanitary appliances complying with the standards EN 31, EN 32 and EN 111 ;
- secondly, give the various options for connecting with the water supply.

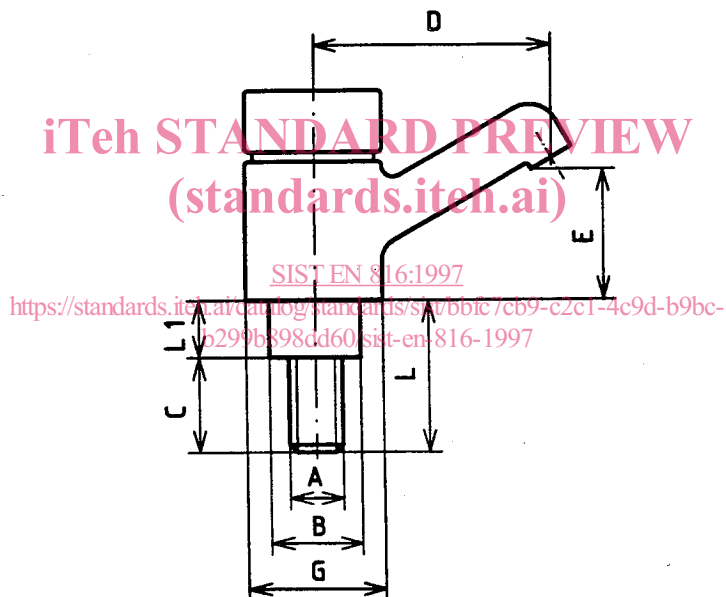


Figure 1 : Tap with visible body for horizontal surface

Table 2 : Dimensions

Values in millimetres		
Dimension	Values (mm)	Comments
A	G 1/2 B	
B	29 max.	May be threaded
C	11 min.	
D	100 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 et 18 mm in thickness and connection to the water supply	

NOTE : Supply by flexible hose is permitted (see 8.5.2)

## 8.2 Taps with visible body for mounting on vertical surfaces (see figure 2 and table 3)

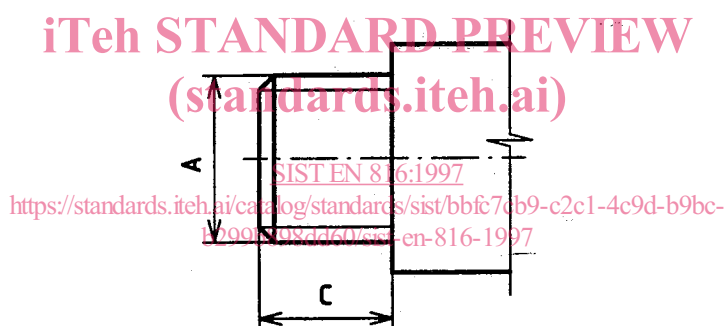


Figure 2 : Threaded inlets of taps with visible body for mounting on vertical surfaces

Table 3 : Dimensions of threaded inlets

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

### 8.3 In-line tapware with threaded inlet and outlet

#### 8.3.1 Inlets and outlets aligned (see figure 3 and table 4)

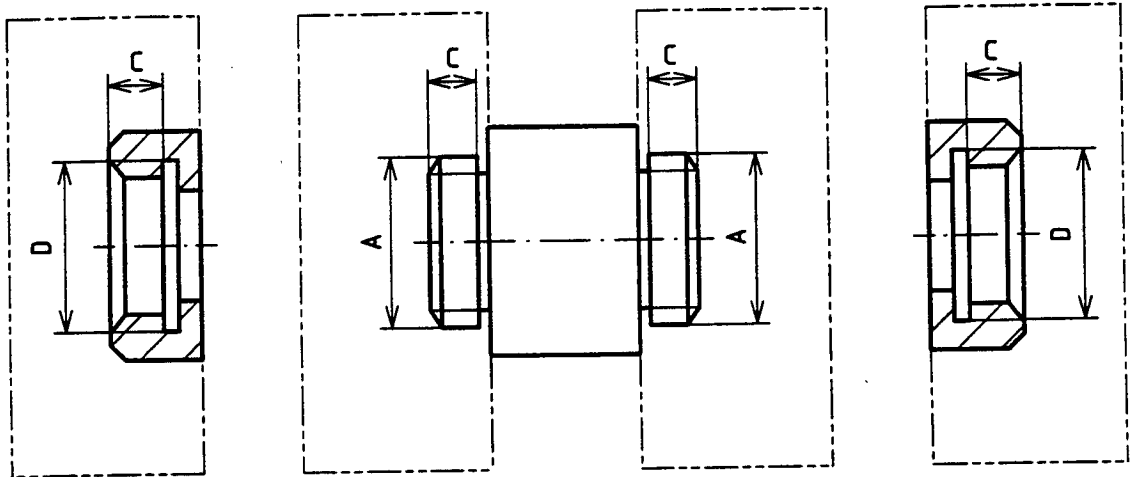


Figure 3 : Tapware with inlets and outlets aligned

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#### 8.3.2 Inlets and outlets at right angles (see figure 4 and table 4)

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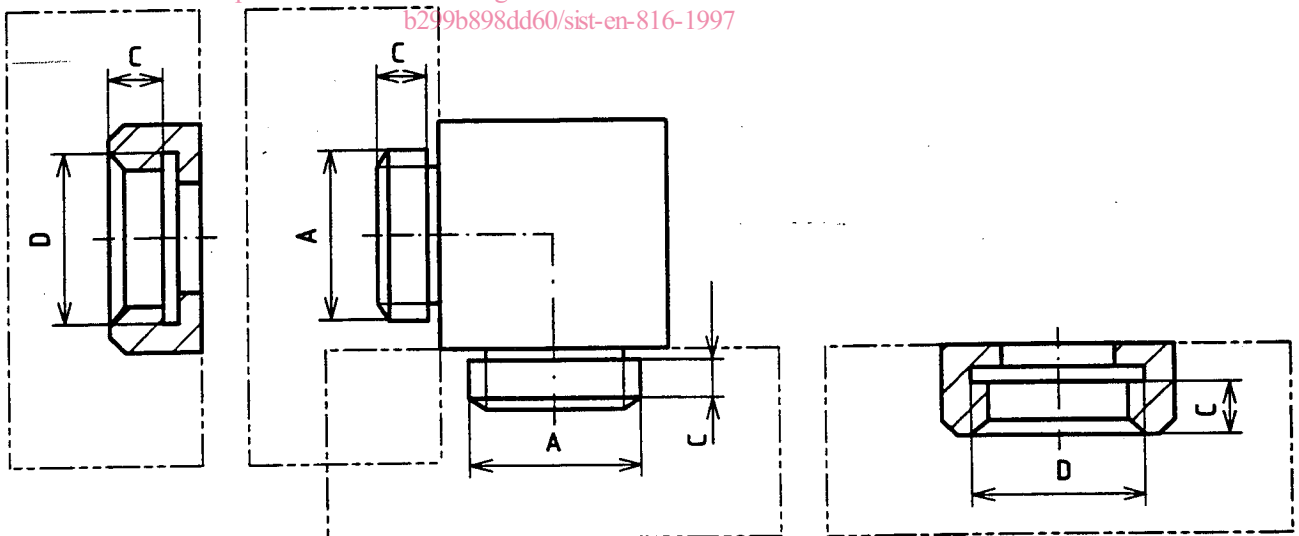


Figure 4 : Tapware with inlets and outlets at right angles

**Table 4 : Dimensions of threads**

Dimension	Values in millimetres	
	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 shall be stated (e.g. In-line tapware G 1/2 B male with female outlet G 3/4 with inlet and outlet aligned).		

**8.4 Concealed tapware for vertical surfaces**

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

**8.5 Mixer for horizontal surface (see figures 5, 6 and 7 and table 5)**

The standardized dimensions of self closing mixers :

- firstly, guarantee their mounting and interchangeability on sanitary appliances complying with the standards EN 31, EN 32 and EN 111 ;

- secondly, give the various options for connecting with the water supply.

## 8.5.1 Supply copper by tube

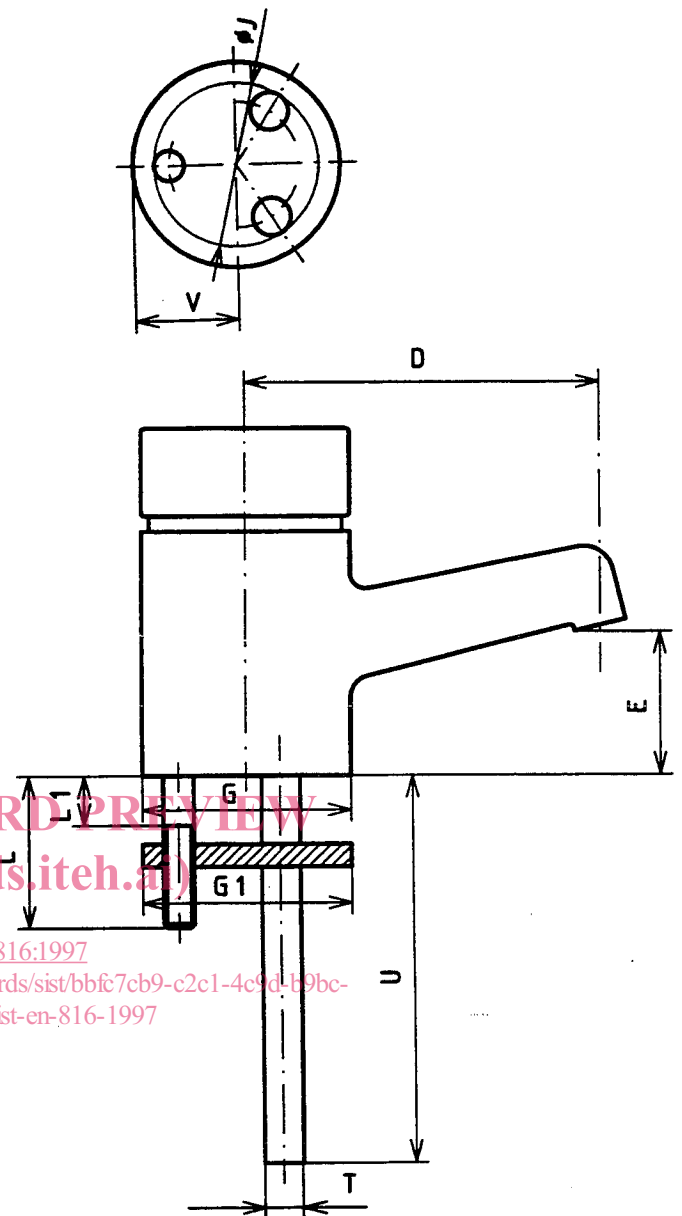
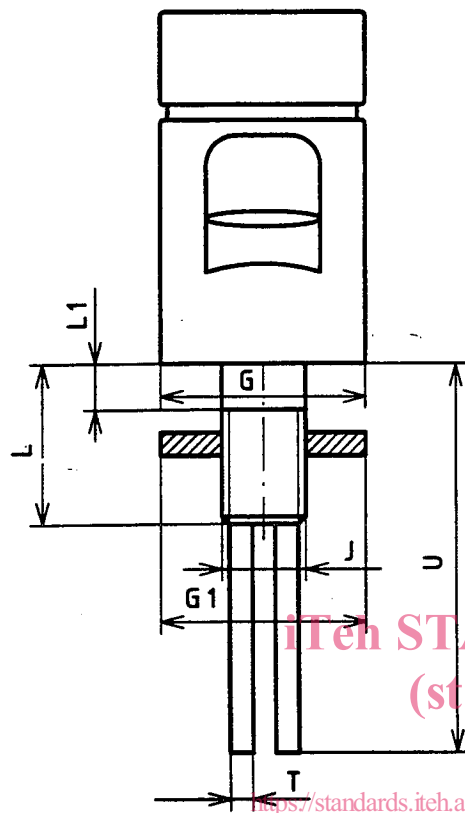


Figure 5 : Mixer for mounting on horizontal surface supply by tube (Fixation a)

Figure 6 : Mixer for mounting on horizontal surface supply by tube (Fixation b)