



NSAI
Standards

Irish Standard
I.S. EN 15091:2013

Sanitary tapware - Electronic opening and closing sanitary tapware

I.S. EN 15091:2013

Incorporating amendments/corrigenda/National Annexes issued since publication:

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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This document is based on:

EN 15091:2013

Published:

2013-12-11

This document was published under the authority of the NSAI and comes into effect on:

2013-12-22

ICS number:

91.140.70

NOTE: If blank see CEN/CENELEC cover page

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Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

EN 15091

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2013

ICS 91.140.70

Supersedes EN 15091:2006

English Version

Sanitary tapware - Electronic opening and closing sanitary tapware

Robinetterie sanitaire - Robinet sanitaire à ouverture et fermeture électroniques

Sanitärarmaturen - Sanitärarmaturen mit elektronischer Öffnungs- und Schließfunktion

This European Standard was approved by CEN on 26 October 2013.

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.

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Contents

Page

Foreword.....	5
Introduction	6
1 Scope	7
2 Normative references	9
3 Terms and definitions	10
4 General requirements and testing	11
4.1 Marking	11
4.2 Materials	11
4.2.1 Chemical and hygienic requirements	11
4.2.2 Exposed surface conditions	11
4.3 Functions	11
4.4 Protection against pollution	11
4.5 Electric characteristics and requirements	11
4.5.1 General.....	11
4.5.2 Electrical safety.....	11
4.5.3 Electrical operation of solenoid valves	12
4.5.4 Electric strength and insulation resistance of the solenoid valve	12
4.5.5 Operational safety.....	12
4.6 Leaktightness characteristics	13
4.6.1 General.....	13
4.6.2 Principle.....	13
4.6.3 Apparatus	14
4.6.4 Leaktightness of tapware upstream of the obturator	14
4.6.5 Leaktightness of tapware downstream of the obturator with the obturator open	14
4.6.6 Leaktightness tests - Summary table	14
4.7 Pressure resistance characteristics - mechanical performance under pressure	15
4.7.1 General.....	15
4.7.2 Principle.....	15
4.7.3 Apparatus	15
4.7.4 Procedure	15
4.7.5 Requirements	15
5 Requirements and testing for tapware	15
5.1 Scope	15
5.2 Dimensional characteristics	15
5.2.1 General.....	15
5.2.2 Tap with visible body for horizontal surfaces	15
5.2.3 Taps with visible body for mounting on vertical surfaces	17
5.2.4 In-line tapware with threaded inlet and outlet	17
5.2.5 Concealed tapware for vertical surfaces.....	18
5.2.6 Mixing valves for horizontal surface.....	18
5.2.7 Mixing valves with visible body for mounting on vertical surfaces with captive nuts and eccentric unions	20
5.2.8 Mixing valves with opposed inlets.....	20
5.2.9 Nozzle outlets for use with flow rate regulators	22
5.2.10 Special cases	22
5.3 Hydraulic characteristics	22
5.3.1 General.....	22
5.3.2 Test apparatus for tapware intended for Type 1 water supply systems.....	23

5.3.3	Principle of the flow test	26
5.3.4	Requirements	27
5.3.5	Cross flow between hot and cold water	27
5.4	Water hammer	27
5.4.1	Principle of water hammer test	27
5.4.2	Test apparatus	28
5.4.3	Procedure	28
5.4.4	Requirements	29
5.5	Endurance	29
5.5.1	General.....	29
5.5.2	Principle.....	29
5.5.3	Procedure for single taps	29
5.5.4	Procedure for mixers.....	30
5.5.5	Requirements	30
5.6	Acoustic characteristics	30
5.6.1	General.....	30
5.6.2	Procedure	31
5.6.3	Requirements	31
6	Requirements and testing for flushing valves for urinals	32
6.1	Scope	32
6.2	Definitions	32
6.2.1	Single flush urinal valves.....	32
6.2.2	Siphon action flushing urinal valves	32
6.2.3	Isolating valves for flushing urinal valves	32
6.3	Classification of flushing urinal valves	32
6.4	Designation	33
6.5	Dimensional characteristics	33
6.6	Hydraulic characteristics	34
6.6.1	General.....	34
6.6.2	Test method	34
6.7	Measurement of water hammer for urinal flushing valves	35
6.7.1	Principle of water hammer test	35
6.7.2	Test apparatus	35
6.7.3	Procedure	35
6.7.4	Requirements	36
6.8	Mechanical endurance	36
6.8.1	General.....	36
6.8.2	Apparatus	36
6.8.3	Procedure	36
6.8.4	Requirements	37
7	Requirements and testing for flushing valves for WCs	37
7.1	Scope	37
7.2	Definitions	37
7.3	Classification	38
7.3.1	General.....	38
7.3.2	6 l and 6 to 9 l valves	38
7.3.3	9 l valves	38
7.4	Dimensional characteristics	38
7.5	Hydraulic characteristics	39
7.5.1	General.....	39
7.5.2	Test method	39
7.5.3	Testing of the flow rate / Impact force at lower dynamic pressure	43
7.5.4	Testing of the flow rate / Volume at lower dynamic pressure.....	44
7.5.5	Testing of flush flow rate / impact force at upper dynamic pressure	45
7.5.6	Measurement of water hammer.....	46
7.6	Principle and verification of atmospheric pipe interrupters of WC flushing valves	46
7.7	Mechanical endurance	47

EN 15091:2013 (E)

7.7.1	General	47
7.7.2	Procedure	47
7.7.3	Minimum requirements	47
7.8	Acoustic characteristics	47
Annex A	(normative) Design of pressure take-off tees	48
Annex B	(informative) Potential consequences of use outside the recommended operating limits	50
Bibliography	51

Foreword

This document (EN 15091:2013) 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 June 2014, and conflicting national standards shall be withdrawn at the latest by June 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 15091:2006.

Significant technical differences between this edition and EN 15091:2006 are as follows:

- the introduction of a maximum voltage;
- the change of dimensional characteristics (see 5.2);
- the change in minimum flow rates and hammer test (5.3.5 and 5.3.3).

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.

EN 15091:2013 (E)

Introduction

This standard is relevant for electrically operated (opening and closing) sanitary tapware used with sanitary appliances, with a maximum voltage of 42 V AC / 72 V DC, in the enclosure of the tap.

Such tapware can be operated by any electrical source e.g. mains with a transformer, battery, etc.

Flow and temperature regulation devices installed either upstream or downstream of the tapware are not covered by this specification.

The purpose of this standard is to define requirements for the:

- 1) marking, identification, leak-tightness, electrical and operational safety, mechanical performance and limitation of water hammer for electrical opening and closing tapware;
- 2) dimensional, hydraulic, endurance and acoustic characteristics;
- 3) procedure of tests in order to verify these characteristics.

As for possible unfavourable effects of the product to which this standard applies, on the quality of water intended for human consumption:

- 4) no information is provided by this standard on possible use restrictions of the product in any of the member states of the EU or EFTA;
- 5) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or characteristics of this product remain in force.

Requirements for different products are defined in different clauses of this standard as illustrated in Table 1.

Table 1 — Identification of the clauses of this standard

	MARKING	DIMENSIONAL CHARACTERISTICS	ENDURANCE	ACOUSTIC	ELECTRICAL SAFETY	OPERATIONAL SAFETY	LEAKTIGHTNESS	MECHANICAL RESISTANCE	HYDRAULIC CHARACTERISTICS	WATER HAMMER	WATER HAMMER FOLLOWING PRODUCT STANDARD
Clause 4. General requirements and testing	X				X	X	X	X			
Clause 5. Requirements and testing for tapware		X	X	X					X	X	
Clause 6. Requirements and testing for flushing valves for urinals		X	X						X	X	
Clause 7. Requirements and testing for flushing valves for WCs		X	X	X					X		X

1 Scope

The purpose of this European Standard is to define requirements for marking, identification, leaktightness, electrical and operational safety and mechanical resistance for sanitary tapware with opening and closing controlled electronically.

The conditions of use for the supply system type are specified in Table 2:

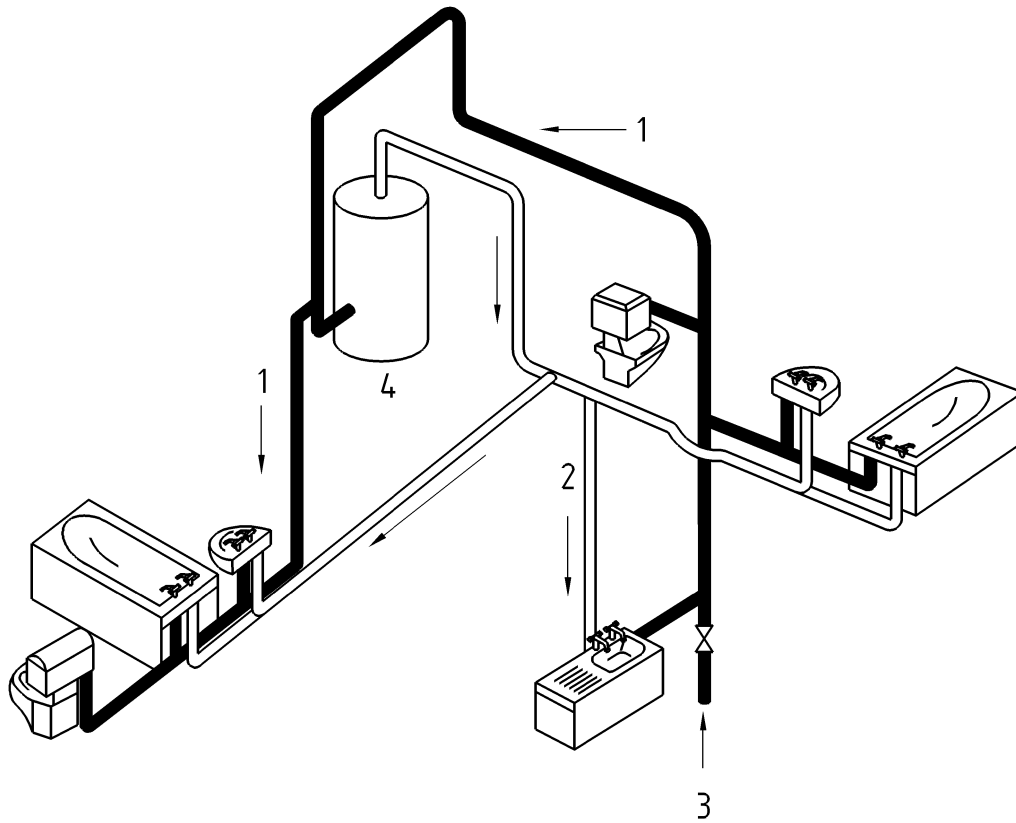
Table 2 — Conditions of use

Water supply system		Limits of use		Recommended limits of operation	
		Tapware with normally open or normally closed (monostable) solenoid valves	Tapware with latching (bistable) solenoid valves	Tapware with normally open or normally closed (monostable) solenoid valves	Tapware with latching (bistable) solenoid valves
Type 1 (see Figure 1)	Minimum pressure dynamic	0,05 MPa (0,5 bar)	0,05 MPa (0,5 bar)	(0,1 to 0,5) MPa [(1 to 5) bar]	(0,1 to 0,5) MPa [(1 to 5) bar]
	Maximum pressure static	1 MPa (10 bar)	1 MPa (10 bar)	1 MPa (10 bar)	0.8 MPa (8 bar)
Type 2 ^a (see Figure 2)	Minimum pressure dynamic	0,01 MPa (0,1 bar)	0,01 MPa (0,1 bar)	(0,01 to 0,2) MPa [(0,1 to 2) bar]	(0,01 to 0,2) MPa [(0,1 to 2) bar]
	Maximum pressure static	1 MPa (10 bar)	1 MPa (10 bar)	0.8 MPa (8 bar)	0.6 MPa (6 bar)
Temperature of the water		≤ 75 °C	≤ 75 °C	≤ 65 °C	≤ 65 °C

^a For Type 2, the manufacturer is to declare the minimum operating pressure at which opening, closing and the specified flow rate can be obtained.

There is usually no acoustic classification for tapware used in supply systems of Type 2 and no specifications governing the level of noise emissions from these water installations. If supply pressures are such that excessive noise is generated it is recommended that pressure or flow regulators are fitted in the system. Or where practicable, tapware conforming to the appropriate acoustic classification are used.

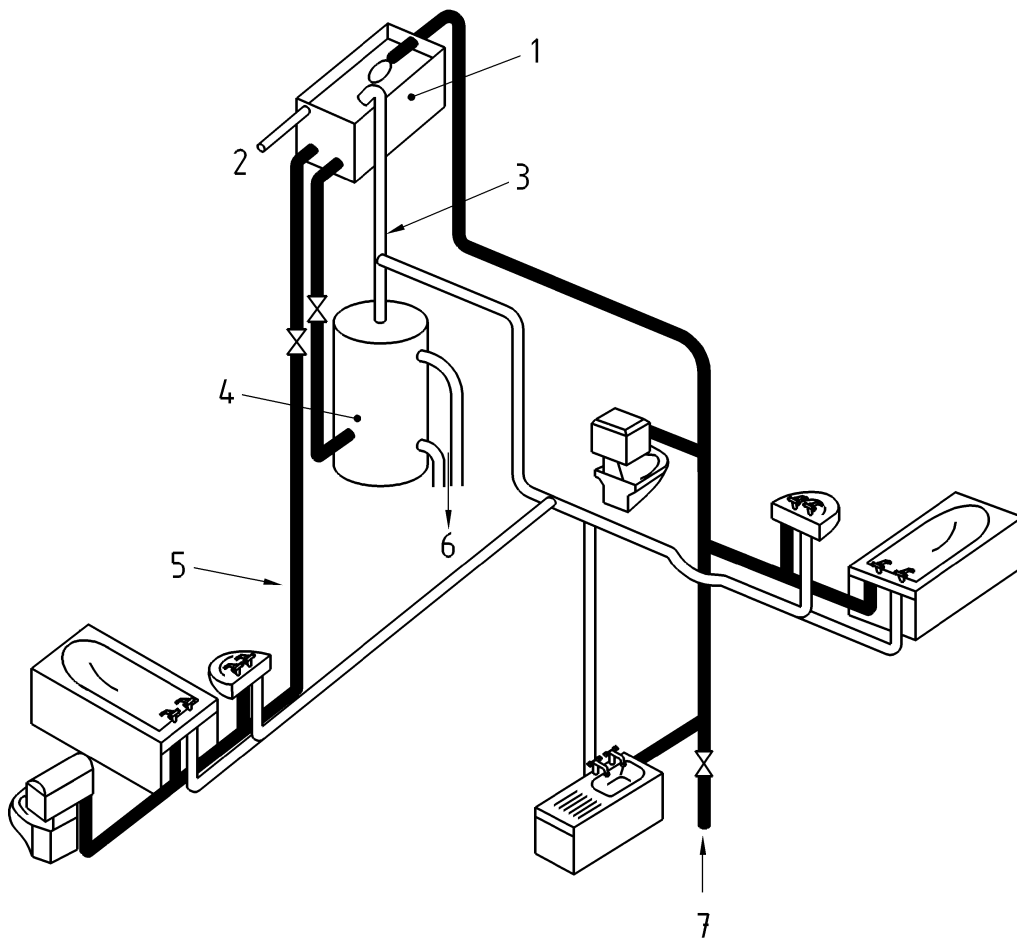
Annex B lists possible consequences of using a product outside its recommended operating range.



Key

- | | |
|--------------|---|
| 1 cold water | 3 mains supply pipe (Supply pressures from (0,05 to 1,0) MPa ((0,5 - 10) bar) |
| 2 hot water | 4 water heater |

Figure 1 —Type 1 — Supply system with a pressure range of (0,05 to 1,0) MPa ((0,5 to 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 8 bar)

Figure 2 — Type 2 — Supply system with a pressure range of (0,01 to 0,8) MPa ((0,1 to 8) 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 31, *Wash basins — Connecting dimensions*

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