

SANITARY TAPWARE
Technical document
077-13

EChAU rating for electronic opening and closing valves

Technical Document 077-13 Rev02
01/10/2020

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MODIFICATION HISTORY

Revision no.	Application date	Modifications
00	01/06/2017	<p>Update to the document layout and reference.</p> <p>Content modifications:</p> <ul style="list-style-type: none"> - Some technical changes
01	02/04/2019	<p>Cancel and replaces technical document 077-13_Rev 18</p> <p>Update of technical document according to the new frame:</p> <p><i>"Trame_doc_technique_VF_PC_DT_R3."</i></p> <p>Content modifications</p>
02	01/10/2020	<p>Reference to the regulation for use of marks (DT077-00)</p> <ul style="list-style-type: none"> - Addition of the method for determining the scores in chapter 2.11 "E.C.A.U. and / or E.Ch.A.U. rating"

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1 Normative support for EChAU rating

1.1 Purpose

The purpose of this chapter is to list the articles of standard NF EN 15091 that are taken into account for the EChAU rating in accordance with the regulation for use DT077-00.

1.2 List of the tests involved

The table below lists the articles of the Standard NF EN 15091.

1.2.1 For tapware

Articles	Title of articles
4	General requirements and tests
4.1	Marking
4.2	Materials
4.2.1	Chemical and hygienic requirements
4.2.2	Requirements related to exposed surfaces
4.3	Functions
4.4	Anti-pollution protection
4.5	Electrical characteristics and requirements
4.5.5	Operating safety
4.5.5.1	Test procedure for electrical valves
4.5.5.3	Test procedure for battery-operated valves
4.6	Leaktightness characteristics
4.6.4	Leaktightness of tapware upstream of the obturator
4.6.5	Leaktightness of the tapware downstream of the obturator with the obturator open
4.7	Pressure resistance characteristics - Mechanical behaviour under pressure
5	Tapware requirements and tests
5.2	Dimensional characteristics
5.2.2	Surface-mounted taps for installation on horizontal surfaces
5.2.3	Surface-mounted taps for installation on vertical surfaces
5.2.4	Inline tapware with threaded inlet and outlet
5.2.6	Mixer taps for installation on horizontal surfaces
5.2.7	Surface-mounted taps for installation on vertical surfaces with captive nuts
5.2.8	Mixer taps with opposite inlets
5.3	Hydraulic characteristics
5.3.3	Flow test principle
5.3.5	Cold and hot water cross-feed
5.4	Water hammer
5.5	Endurance
5.5.3	Operating procedure for single taps
5.5.4	Operating procedure for mixer taps
5.6	Acoustic characteristics

1.2.1 For urinal flush valves

Articles	Title of articles
6	Requirements and tests for urinal flush valves
6.3	Classification of urinal flush valves
6.5	Dimensional characteristics
6.6	Hydraulic characteristics
6.7	Water hammer measurement for urinal flush valves
6.8	Mechanical endurance
6.8	Mechanical endurance

1.2.3 For WC flush valves

Articles	Title of articles
7	Requirements and tests for WC flush valves
7.3	Classification
7.4	Dimensional characteristics
7.5	Hydraulic characteristics
7.5.2.3	Operating procedure for flow rate/impact force test
7.5.2.4	Operating procedure for flow rate/volume test
7.5.3	Flow rate/impact force test at reduced dynamic pressure
7.5.4	Flow rate/volume test at reduced dynamic pressure
7.5.5	Flush flow/impact force test at high dynamic pressure
7.5.6	Water hammer measurement
7.6	Principle and verification of atmospheric interrupters for WC flush valves
7.7	Endurance
7.8	Acoustic characteristics

2 EChAU rating

2.1 Foreword

The EChAU rating was created to meet the expectations of market players who require performances that are superior or complementary to that indicated in Standard NF EN 15091.

For electronic opening and closing valves, the requirements are:

- Evaluation of electronic detection;
- Hydraulic performance levels according to user needs;
- Creation of the 3 acoustic classes to clarify this performance;
- Increased endurance performance by multiplying by 2.5 the requirements of the European standard to optimise maintenance frequencies.

It should be noted, however, that the use of this EChAU rating is voluntary and supplementary to the evaluation of a product that is already certified under the NF EN 15091 Standard.

2.2 Purpose

The purpose of this chapter is to establish the dimensional, leaktightness, hydraulic, mechanical, mechanical endurance and acoustic performance levels to be met by electronic opening and closing valves to qualify for ECAU and/or EChAU ratings.

2.3 Field of application

This chapter applies to electronic opening and closing valves subject to Standard NF EN 15091.

2.4 References to standards and additional specifications

NF EN 15091:2014	Sanitary tapware - Electronic opening and closing sanitary tapware.
NF EN 246: 2003	Sanitary tapware - General specifications for flow rate regulators.
NF EN ISO 3822-1: 1999	Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 1: Method of measurement
NF EN ISO 3822-2: 1995	Acoustics - Laboratory tests on noise emission from tapware and hydraulic equipment used in water supply installations - Part 2: Guidelines for the installation and operation of draw-off taps and tapware.
T 54 094: 2006	Plastics - Piping components made of unplasticised polyvinyl chloride and unplasticised chlorinated polyvinyl chloride - Fittings for pressure pipelines - Determination of resistance to alternate pressure stress.
DT077-00	Regulations for use of marks

2.5 EChAU rating principle

The rating can only be assigned to taps

- pursuant to Standard NF EN 15091. The test procedures are defined in Article 1 of this document.
- having passed the performance tests for the EChAU rating. The test procedures are provided in Article:
 - 2.6 for all tapware products covered by Standard NF EN 15091;
 - 2.7 for sanitary tapware;
 - 2.8 for urinal flush valves;
 - 2.9 for WC flush valves.

2.5.1 Meaning of E

The flow characteristic taken into account is the use flow 'q' of the tap as it is equipped (standard accessories: regulators, fittings, etc.).

There are 7 classes for this characteristic. See Article 2.11.1.1.

2.5.2 Meaning of C and Ch

The comfort characteristics taken into account are the dimensions, hydraulic performance and resistance to alternating pressure stress.

There are 2 classes for this characteristic. See Article 2.11.2.1.

	Ch		
Field of application	<ul style="list-style-type: none"> – Household with waiver (house, apartment, student residence) – Public (Hospitality, ERP (institution receiving the public), office, EHPA (nursing home), non-medical retirement home, spa treatment centre) 		
Product	Sanitary tapware	Urinal flush valve	WC flush valve
Class 1	<ul style="list-style-type: none"> – Verification of detection – Verification of hydraulic operation – Alternating pressures – Verification of installation system for fixed-spout single-hole taps – Dimensions – Hydraulic characteristics 	<ul style="list-style-type: none"> – Verification of detection – Verification of hydraulic operation – Alternating pressures 	<ul style="list-style-type: none"> – Verification of detection – Verification of hydraulic operation – Alternating pressures
Class 2	<ul style="list-style-type: none"> – Must be Ch1 – Controlled flow rate for water saving with a flow regulator 	/	/

2.5.3 Meaning of A

The acoustic characteristic taken into account is the sound pressure level, L_{ap} .

There are 3 classes for this characteristic. See Article 2.11.3.1.

2.5.4 Meaning of U

The wear characteristic taken into account is the mechanical endurance and, more precisely, the number of operating cycles to which the obturators are subjected;

There is 1 class for this characteristic. See Article 2.11.4.1.

An application for an EChAU rating implies a class 3 application for endurance tests (U3).

2.6 Performance level for the EChAU rating for products subject to the NF EN 15091 Standard (sanitary tapware, urinal flush valves and WC flush valves)

2.6.1 Marking

In addition to Standard NF EN 15091, it is hereby specified that:

- the CE marking rules apply only to the solenoid valve of electronic opening and closing valves;
- the obturator of the electronic closing and opening valve must have a specific U3 marking for these ratings. This marking is not applicable if the cartridge is of a special design to fit the body;

2.6.2 Materials

No requirements in addition to those under the NF EN 15091 Standard.

2.6.3 Functions

No complementary requirements to those under the NF EN 15091 Standard.

2.6.4 Anti-pollution protections

No complementary requirements to those under the NF EN 15091 Standard.

2.6.5 Electrical characteristics and requirements

No complementary requirements to those under the NF EN 15091 Standard.

2.6.6 Leaktightness characteristics

No complementary requirements to those under the NF EN 15091 Standard.

2.6.7 Pressure resistance characteristics

No complementary requirements to those under the NF EN 15091 Standard.

2.6.8 Electronic detection verification test

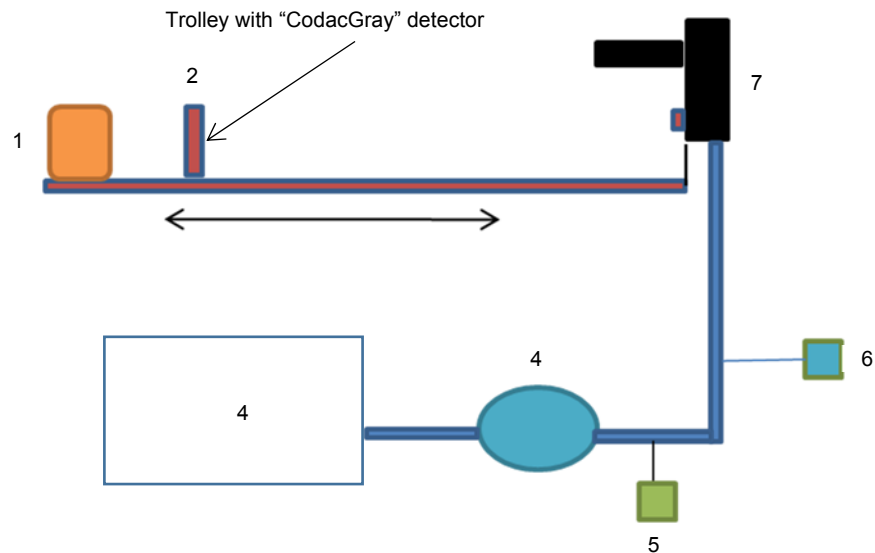
2.6.8.1 *Verification of electronic detection without lighting conditions*

2.6.8.1.1 Test principle

The test consists of verifying that the electronic detection functions correctly according to the parameter(s) established by the applicant/holder without any lighting conditions.

2.6.8.1.2 Equipment

Test equipment as shown in Figure 1 must be used:



Legend

1. Motor with speed variator
2. Trolley assembled on a rail
3. Tank with a capacity of at least 100 litres
4. Pump with speed variator
5. Pressure sensor from 1 to 10 bar (measurement accuracy of +/- 1% of the measured value)
6. Temperature sensor
7. Tap

Figure 1 – Test apparatus for the electronic detection verification test

2.6.8.1.3 Operating procedure

- assemble the valve on the bench and connect the valve to the cold water supply system;
- determine and record the position D_0 (point 0 between the cell and the rail);
- supply at a dynamic pressure of (3 ± 0.2) bar;

For an adjustable detection distance:

- set the maximum detection distance " D_{max} " * on the valve;
- drive the "CodacGray detector" trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the " D_{max} " position to activate detection and valve water flow;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;
- record the value of detection distance D_{max} ;
- set the detection distance to a minimum " D_{min} " * on the valve;
- drive the "CodacGray detector" trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the " D_{min} " position to activate detection and valve water flow;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;
- record the value of detection distance D_{min} ;

For a non-adjustable detection distance:

- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_1 ” position to activate detection and valve water flow.
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 .
- record the value of detection distance D_1 .

2.6.8.1.4 Requirements

Measured distance values must conform to the manufacturer’s specifications.

2.6.8.2 Verification of electronic detection with lighting conditions

2.6.8.2.1 Test principle

The test consists of verifying that the electronic detection functions correctly according to the parameter(s) established by the applicant/holder:

- without lighting conditions.
- and with certain lighting conditions.

2.6.8.2.2 Equipment

Test equipment as shown in Figure 1 must be used.

2.6.8.2.3 Operating procedure

- assemble the valve on the bench and connect the valve to the cold water supply system;
- determine and record the position D_0 (point 0 between the cell and the rail);
- supply at a dynamic pressure of (3 ± 0.2) bar;
- use the lighting (white light of approx. 5000 lux) by directing the spotlight on the cell at an appropriate angle;

For an adjustable detection distance:

- set the maximum detection distance “ D_{max} ” * on the valve;
- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_{max} ” position to activate detection and valve water flow;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;
- record the value of detection distance D_{max} ;
- set the detection distance to a minimum “ D_{min} ” * on the valve;
- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_{min} ” position to activate detection and valve water flow;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;
- record the value of detection distance D_{min} ;

For a non-adjustable detection distance:

- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_1 ” position to activate detection and valve water flow.
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 .
- record the value of detection distance D_1 .

2.6.8.2.4 Requirements

Measured distance values must conform to the manufacturer’s specifications.

2.6.8.3 Flow cut-off verification tests

2.6.8.3.1 Verification of user convenience cut-off

2.6.8.3.1.1 Test principle

The test consists of verifying that the cut-off functions correctly according to the parameter(s) established by the manufacturer:

2.6.8.3.1.2 Equipment

Test equipment as shown in Figure 1 must be used

2.6.8.3.1.3 Operating procedure

- assemble the valve on the bench and connect the valve to the cold water supply system;
- determine and record the position D_0 (point 0 between the cell and the rail);
- supply at a dynamic pressure of (3 ± 0.2) bar;
- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_1 ” position to activate detection and valve water flow;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;

For adjustable cut-off:

- set the convenience cut-off to the maximum “ T_{max} ” on the valve;
- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_1 ” position to activate detection and valve water flow;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;
- wait for the end of the opening time (valve closure)
- record the cut-off time value T_{max} ;
- set the convenience cut-off to the minimum “ T_{min} ” on the valve;
- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_1 ” position to activate detection and valve water flow;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;
- record the flow time;
- wait for the end of the opening time (valve closure);
- record the cut-off time value T_{min} ;

For non-adjustable cut-off:

- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D_0 position to the “ D_1 ” position to activate detection and valve water flow. ;
- then the trolley returns at a high speed of (75 ± 5) mm/s at point D_0 ;
- record the flow time.

2.6.8.3.1.4 Requirements

Measured distance values must conform to the manufacturer’s specifications.

2.6.8.3.2 Verification of safety cut-off

2.6.8.3.2.1 Test principle

The test consists of verifying that the safety cut-off works correctly when remaining in front of the detector, according to the parameter(s) established by the applicant/holder.

2.6.8.3.2.2 Equipment

Test equipment as shown in Figure 1 must be used

2.6.8.3.2.3 Operating procedure

- assemble the valve on the bench and connect the valve to the cold water supply system;
- determine and record the position D_0 (point 0 between the cell and the rail);

- supply at a dynamic pressure of (3 ± 0.2) bar;
- drive the “CodacGray detector” trolley forward at a slow speed (10 ± 5) mm/s from the D₀ position to the “D₁” position to activate detection and valve water flow; do not go back to point D₀. Record the cut-off value T in the D₁ position

2.6.8.3.2.4 Requirements

Measured distance values must conform to the manufacturer’s specifications.

2.6.9 Verification of hydraulic operation under minimal pressure

2.6.9.1 Test principle

The test consists of verifying that the electronic valve works correctly according to the minimum pressure.

2.6.9.2 Equipment

The equipment is indicated in Article 5.3.2 of Standard NF EN 15091.

2.6.9.3 Operating procedure

The test is carried out on the tapware for type 1 supply systems as supplied, i.e. with any accessories installed.

The test is conducted with cold water at a dynamic pressure of $(0.05 + 0.01/-0)$ MPa or $(0.5 + 0.1/-0)$ bar for tapware for type 1 supply systems;

Mixer taps are tested in hot, cold and mixed positions, with cold water.

The tapware must be operated according to the instructions provided by the applicant/holder.

Flow rate according to the product

Type of product	Device	Electronic valve with cold water supply	Electronic valve with cold water and hot water supplies in the temperature setting range of minimum temperature, medium temperature and maximum temperature
With water saving	Washbasin	$1.8 \text{ L/min} \leq q < 6 \text{ L/min}$	$1.8 \text{ L/min} \leq q < 6 \text{ L/min}$
	Shower	$6.6 \text{ L/min} \leq q < 9 \text{ L/min}$	$6.6 \text{ L/min} \leq q < 9 \text{ L/min}$

2.6.10 Resistance to alternating pressure stress

To be examined for the EChAU rating, automatic shut-off valves must meet the following requirements:

- Automatic closing and opening valves used in a sanitary installation are subject to considerable pressure variations due to the closing of installed devices - solenoid valves of washing machines, mixers, valves, etc.
- To ensure their resistance to such stress, it seemed advisable to use a test described in the T 54-094 Standard for the rating of supply hoses and piping components.

2.6.10.1 Test principle

Application during 200 cycles of a variable and defined internal hydraulic pressure at the mechanical mixer inlets, with the mechanical mixer in the closed position.

2.6.10.2 Equipment

The equipment essentially includes:

A pressure generator capable of generating variable pressure that can vary at constant frequency between a low limit and a high limit, establishing constant amplitude. The diagram of that variation takes the form of a generally rectangular signal (see Figure 2).

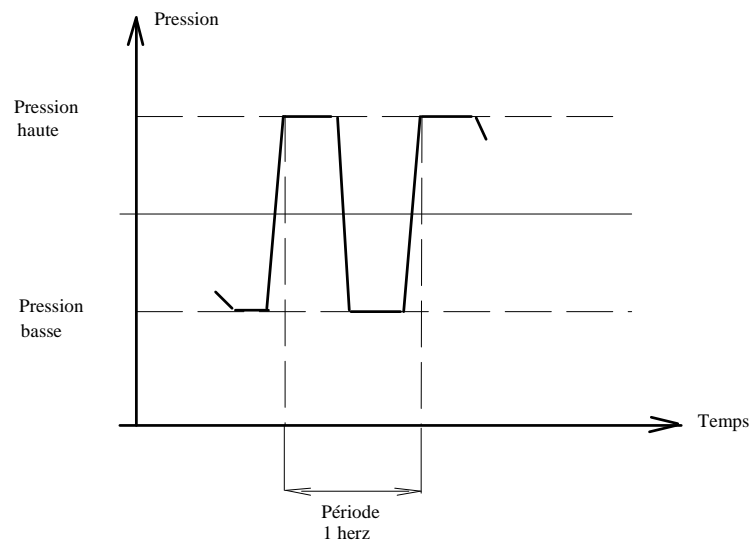


Figure 2 – Signal waveform – alternating pressures

- the time needed to shift from low pressure to high pressure and vice versa must be as short as possible and never longer than one-tenth of the period;
- the low and high pressure values must be obtained and checked to within $\pm 2\%$ of the desired values;
- to check the waveform of the signal representing the pressure variation, the generator must be combined with a device that can verify the pressure changes in the test specimen (low-inertia pressure sensor and graphic data recorder or oscilloscope).

2.6.10.3 Operating procedure

Apply 200 cycles to the closed tap (filled with water and cleared of air):

- low pressure of (8 ± 1) bar;
- high pressure of (50 ± 1) bar;
- frequency of (1 ± 0.5) Hertz.
 - 1) on one of the inlets, (the other being in the open air);
 - 2) on the other inlet;

Note: A “slight” leak is allowed during the test if it does not have an influence on the low and high pressures of the test.

After the alternating pressure test, perform the leak test in accordance with Article 4.6.4 of Standard NF EN 15091.

2.6.10.4 Required characteristics

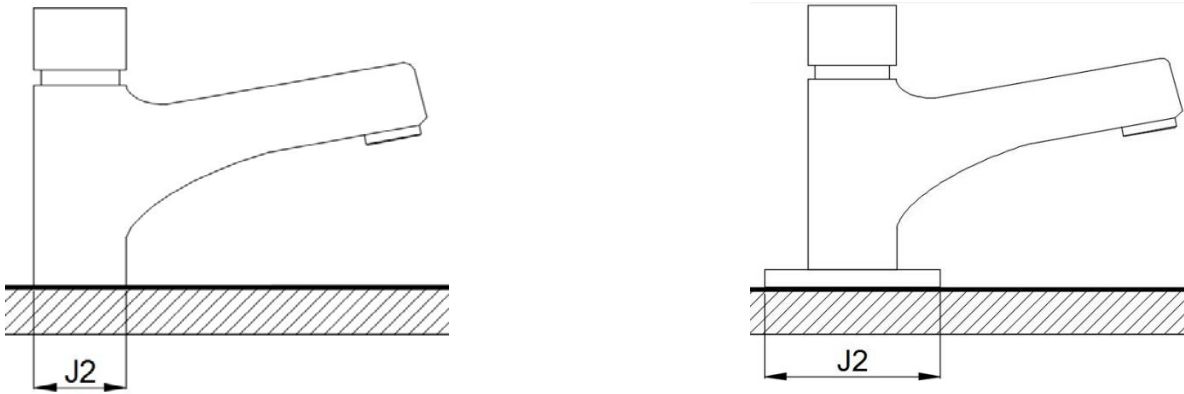
During the leak test, no visible deterioration or leakage should be observed.

2.7 Performance level for EChAU rating for sanitary tapware

2.7.1 Dimensional characteristics

In addition to the NF EN 15091 Standard, the following additional dimensions must be verified: J2, D4 and P2.

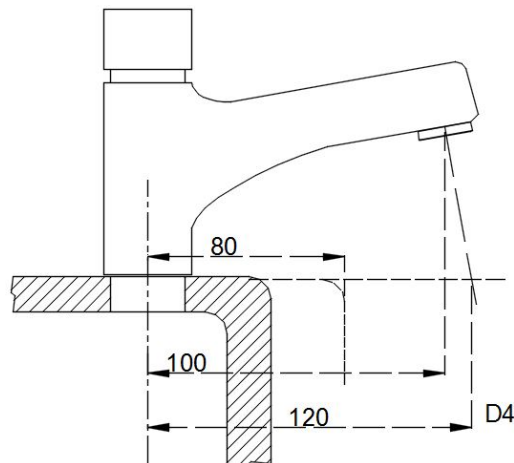
- The diameter of the tapware body base (J2, established at a minimum of 45 mm) must not be obtained by introducing an insert between the base of the body and the support.



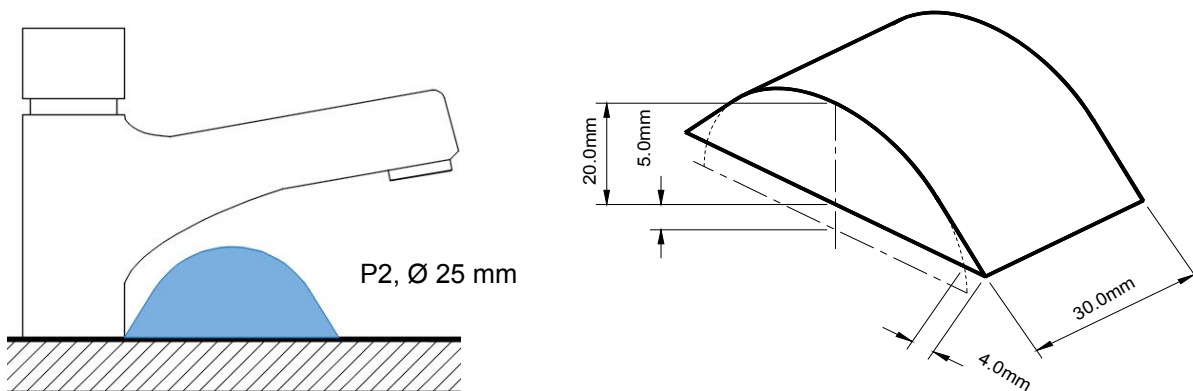
- for washbasin taps, the jet axis must intersect the washbasin surface (at the tap base) at least 120 mm from the tap base axis (D4).

NOTE As the current trend is to make taps increasingly smaller, if the minimum dimensions of projections and height are combined, the suitability for use requirement is not met.

The figure below shows in dotted lines the maximum range for standard washbasins (80 mm) and for standard taps the minimum projection (100 mm, D1) with the minimum height (25 mm). It is clearly impossible to wash one's hands under the tap.



- the spout must be separated in such a way that a rod consisting of a cylindrical segment with a 25 mm radius that is 20 mm in height and 30 mm in length of the generator can be slid onto the plane of the base. The rod must at least touch the base in the common base plane.



2.7.2 Hydraulic characteristics

In addition to Standard NF EN 15091 (Article 5.3.3), it is hereby specified that the test is carried out:

- with a dynamic pressure of 0.3 (+ 0.02/0) MPa or 3 (+ 0.2/0) bar;
- with cold water < 30 °C for single taps;

Flow rate according to the product

Type of product	Device	Electronic valve with cold water supply	Electronic valve with cold water and hot water supplies in the temperature setting range of minimum temperature, medium temperature and maximum temperature
No water saving	Washbasin	≥ 6 L/min	≥ 6 L/min
	Shower	≥ 9 L/min	≥ 9 L/min

2.7.2.1 Flow rate in “fully open” position

Verification of the flow rate value obtained with class E, see Article 2.11.1.1.

2.7.2.2 “Water saving” controlled flow rate

This test applies to class Ch2.

To be considered in the framework of the EChAU rating, the “water saving” characteristic must meet the following requirements:

Electronic closing and opening valves used in a sanitary installation are subjected to a controlled flow rate when they are used for the washbasins and showers.

To ensure the flow rate in the full flow position, it seemed advisable to use a test described in Article 5.3 of the NF EN 15091 Standard and to measure the flow rate in the fully open position.

2.7.2.2.1 Test principle

The purpose is to determine, for the tested tap, the value of the flow rate for reference pressures of 1.5 - 3 and 4.5 bar, also constant on each of the hot and cold water supplies.

The measurement is conducted on a tap with the flow control device(s) in the full flow position.

2.7.2.2.2 Equipment

See Article 5.3.2.2 of Standard NF EN 15091.

2.7.2.2.3 Operating procedure

- Supply the tap with a dynamic pressure of 0.3 (+ 0.02/0) MPa or 3 (+ 0.2/0) bar.
- Open the flow control device(s) in the fully open position
- Measure and record the flow values in the full flow position.
- Repeat this test with dynamic pressures of 1.5 (+ 0.2/0) MPa or 1.5 (+ 0.2/0) bar and 4.5 (+ 0.2/0) MPa or 4.5 (+ 0.2/0) bar.

2.7.2.2.4 Required characteristics

Flow rate according to the product

Type of product	Flow requirements in L/min		
Dynamic test pressures:	3 (+0,2/0)	1.5 (+0,2/0)	4.5 (+0,2/0)
Washbasin within the setting range of 34 to 44 °C	4 ≤ Q ≤ 6	≥ 2	≤ 9
Shower within the setting range of 34 to 44 °C	9 ≤ Q ≤ 12	≥ 6	≤ 15

2.7.3 Water hammer for tapware

In addition to Standard NF EN 15091 (Article 5.4.4), it is hereby specified that the peak pressure level between the maximum pressure during closing and the static pressure after closing must be less than or equal to 0.3 MPa (3 bar).

2.7.4 Endurance characteristics

In addition to Standard NF EN 15091 (Article 5.5.4), it is hereby specified that the test is carried out:

- at a static pressure of (0.4 ± 0.05) MPa (4 ± 0.5) bar)
- with cold water at a temperature ≤ 30 °C
- hot water temperature between 55 °C and 65 °C

Endurance performance is modified by multiplying by 2.5 the requirements for all mobile equipment under the Standard NF EN 15091.

Given:

- 500,000 cycles for sanitary tapware (Article 5.5.3)

2.7.5 Acoustic characteristics

Tapware with Lap > 30 cannot be admitted for the EChAU rating.

Verification of the acoustic value obtained with class A; see article 2.11.3.1

2.7.6 Verification of the installation system for sanitary tapware

In view of the lack of a tightening system verification test under Standard NF EN 15091 for single-hole taps with a fixed spout (washbasin, bidet and bathtub) which are installed on horizontal planes, it is necessary to verify tightening performance according to the following steps:

2.7.6.1 Test principle:

The test consists of verifying the tightening behaviour by applying a specific force to the end of the tapware spout

2.7.6.2 Test method:

The test is performed by conducting the following operations:

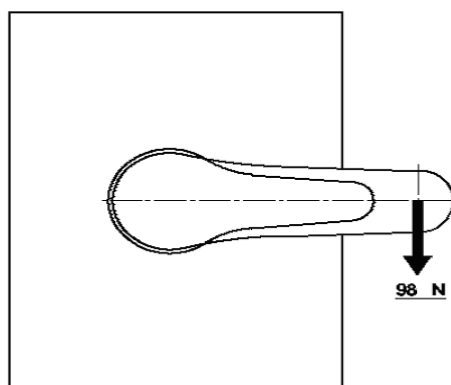
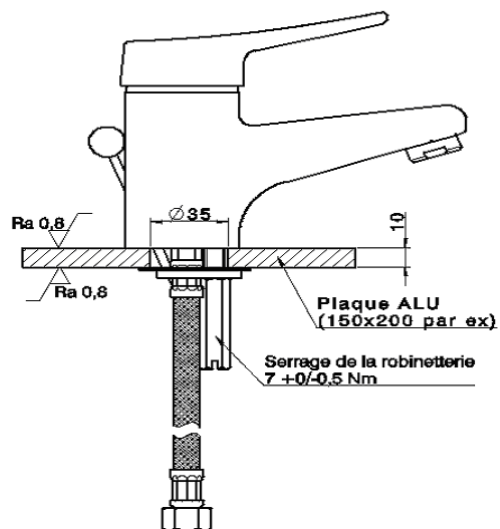
- Install the tapware on the test plate;
- Tighten the nut of the tap installation system to a torque of $7 +0/-0.5$ N.m (if the installation system does not have a nut, tighten the installation system by hand);
- Apply a force of $98 -0/+2$ N at the end of the spout (the point at which the force is to be applied is located on the axis of the aerator);
- Maintain the force during (60 ± 5) s;
- Verify any rotation of the tapware.

2.7.6.3 Requirements:

There should be no rotation of the tapware during the test.

2.7.6.4 Frequency:

The tightening test is carried out when new products are admitted and/or when one of the components of the tapware installation system and/or the tapware component in contact with the table is modified.



2.8 Performance level for the EChAU rating for urinal flush valves

2.8.1 Dimensional characteristics

No complementary requirements to those under the NF EN 15091 Standard.

2.8.2 Hydraulic characteristics

The amendments made to Article 6.6 of Standard NF EN 15091 are the flow requirements as indicated in the table below.

Type of product Dynamic pressure	DN	Class	Device	Flow rate requirements
3 (+0.2/0) bar	15	1.5	Single flush with siphon - Low flow rate	≥ 9 L/min
	15	4	Single flush with siphon - High flow rate	≥ 18 L/min
	15	4	Siphonic action	≥ 18 L/min
	20	6	Siphonic action	≥ 30 L/min

2.8.3 Water hammer measurement for urinal flush valves

In addition to Standard NF EN 15091 (Article 6.7), it is hereby specified that the peak pressure level between the maximum pressure during closing and the static pressure after closing must be less than or equal to 0.3 MPa (3 bar).

2.8.4 Endurance

In addition to Standard NF EN 15091 (Article 6.8), it is hereby specified that the test is carried out:

- with cold water at a temperature ≤ 30 °C

Endurance performance is modified by multiplying by 2.5 the requirements for all mobile equipment under the Standard NF EN 15091.

Given:

- 175,000 cycles for urinal valves (Article 6.8.3).

2.8.5 Acoustic characteristics

Tapware with Lap > 30 cannot be admitted for the EChAU rating.

Verification of the acoustic value obtained with class A; see article 2.11.3.1.

2.9 Performance level for the EChAU rating for WC flush valves

2.9.1 Dimensional characteristics

No complementary requirements to those under the NF EN 15091 Standard.

2.9.2 Hydraulic characteristics

2.9.2.1 Flow rate/impact force test at reduced dynamic pressure

No complementary requirements to those under the NF EN 15091 Standard.

Flow rate/volume test at reduced dynamic pressure

No complementary requirements to those under the NF EN 15091 Standard.

2.9.2.2 Flush flow/impact force test at high dynamic pressure

No complementary requirements to those under the NF EN 15091 Standard.

2.9.2.3 Water hammer measurement

In addition to Standard NF EN 15091 (Article 6.7), it is hereby specified that the peak pressure level between the maximum pressure during closing and the static pressure after closing must be less than or equal to 0.3 MPa (3 bar).

2.9.3 Principle and verification of atmospheric interrupters for WC flush valves

No complementary requirements to those under the NF EN 15091 Standard.

2.9.4 Mechanical endurance

In addition to Standard NF EN 15091 (Article 7.5.6), it is hereby specified that the test is carried out:

- with cold water at a temperature ≤ 30 °C.

Endurance performance is modified by multiplying by 2.5 the requirements for all mobile equipment under the Standard NF EN 15091.

- 175,000 cycles for urinal valves (Article 14.2.2 of NF EN 12541).

2.9.5 Acoustic characteristics

Tapware with Lap > 30 cannot be admitted for the EChAU rating.

Verification of the acoustic value obtained with class A; see article 2.11.3.1.

2.10 Test sequence

2.10.1 For sanitary tapware

Sample Sequence	Order	Tests	
Sample 0 Installation	1.	§2.7.6 Verification of the installation system for sanitary tapware Please note that this test is only conducted for admission	
Sample 1 Materials	1.	§4.4.2A Materials (<i>Neutral salt spray test</i>)	
Sample 2 Materials	1.	§4.4.2B Materials (<i>"air" thermal shock resistance test</i>)	
Sample 3 Hydraulic		Sample 3A – Ch1	Sample 3B – Ch2
	1.	§4.1 Marking	§4.1 Marking
	2.	§4.4 Protection against backflow	§4.4 Protection against backflow
	3.	§5.2 Dimensions	§5.2 Dimensions
	4.	§2.7.1 Dimensions	§2.7.1 Dimensions
	5.	§5.3 Hydraulic characteristics	§5.3 Hydraulic characteristics
	6.	§2.7.2.1 Class E for flow rate	2.7.2.1 Class E for flow rate
	7.	/	2.7.2.2 "Water saving" controlled flow rate
	8.	§2.6.9 Verification of hydraulic operation	§2.6.9 Verification of hydraulic operation
	9.	§5.4 Water hammer	§5.4 Water hammer
	10.	§2.6.8 Verification of electronic detection	§2.6.8 Verification of electronic detection
	11.	§2.6.8.3 Verification of flow cut-off	§2.6.8.3 Verification of flow cut-off
12.	§4.5.5 Operational safety (4.5.5.1 electrical tapware or 4.5.5.3 battery-operated taps)	§4.5.5 Operating safety	
Sample 4 Resistance to pressure	1.	§4.1 Marking	
	2.	§4.4 Protection against backflow	
	3.	§4.7 Resistance to pressure	
Sample 5 Endurance		Sample 5A – Single tap	Sample 5B – Mixer
	1.	§4.1 Marking	§4.1 Marking
	2.	§4.4 Protection against backflow	§4.4 Protection against backflow
	3.	§4.6.4 Leaktightness of tapware upstream of the obturator	§4.6.4 Leaktightness of tapware upstream of the obturator
	4.	§4.6.5 Leaktightness of tapware downstream of the obturator	§4.6.5 Leaktightness of tapware downstream of the obturator
	5.	§5.5.3 Endurance of single taps	§5.5.4 Endurance of mixer taps
	6.	§4.6.4 Leaktightness of tapware upstream of the obturator	§4.6.4 Leaktightness of tapware upstream of the obturator
	7.	§4.6.5 Leaktightness of tapware downstream of the obturator	§4.6.5 Leaktightness of tapware downstream of the obturator
	8.		§5.3.5 Cold and hot water cross-feed
	9.	§2.7.4 Endurance	§2.7.4 Endurance
	10.	§4.6.4 Leaktightness of tapware upstream of the obturator	§4.6.4 Leaktightness of tapware upstream of the obturator
	11.	§4.6.5 Leaktightness of tapware downstream of the obturator	§4.6.5 Leaktightness of tapware downstream of the obturator
12.		§5.3.5 Cold and hot water cross-feed	
Sample 6-7-8 Acoustics	1.	§4.1 Marking	
	2.	§4.4 Protection against backflow	
	3.	§5.6 Acoustic characteristic	
	4.	§2.7.5 Class A for acoustics	
Sample 9 Alternating pressures	1.	§4.1 Marking	
	2.	§4.4 Protection against backflow	
	3.	§2.6.10 Resistance to alternating pressure	
	4.	§4.6.4 Upstream leaktightness	

2.10.2 For urinal flush valves

Sample Sequence	Order	Tests
Sample 1 Materials	1.	§4.4.2A Materials (<i>Neutral salt spray test</i>)
Sample 2 Materials	1.	§4.4.2B Materials (<i>"air" thermal shock resistance test</i>)
Sample 3 Hydraulic	1.	§4.1 Marking
	2.	§4.4 Protection against backflow
	3.	§6.5 Dimensions
	4.	§6.6 Hydraulic characteristics (EN 12541 reference)
	5.	§2.6.9 Verification of hydraulic operation under minimal pressure
	6.	§6.7 Water hammer
	7.	§2.6.8 Electronic detection verification test
	8.	§2.6.8.3 Flow cut-off verification tests
	9.	§4.5.5 Operational safety (4.5.5.1 electrical tapware or 4.5.5.3 battery-operated taps)
Sample 4 Resistance pressure	1.	§4.1 Marking
	2.	§4.4 Protection against backflow
	3.	§4.7 Resistance to pressure
Sample 5 Endurance	1.	§4.1 Marking
	2.	§4.4 Protection against backflow
	3.	§4.6.4 Leaktightness of tapware upstream of the obturator
	4.	§4.6.5 Leaktightness of tapware downstream of the obturator
	5.	§6.8 Urinal endurance
	6.	§4.6.4 Leaktightness of tapware upstream of the obturator
	7.	§4.6.5 Leaktightness of tapware downstream of the obturator
	8.	§6.6 Hydraulic characteristic (EN 12541 reference)
	9.	§2.9.4 Endurance
	10.	§4.6.4 Leaktightness of tapware upstream of the obturator
	11.	§4.6.5 Leaktightness of tapware downstream of the obturator
	12.	§6.6 Hydraulic characteristic (EN 12541 reference)
Sample 6-7-8 Acoustics	1.	§4.1 Marking
	2.	§4.4 Protection against backflow
	3.	§5.6 Acoustic characteristic
	4.	§2.7.5 Class A for acoustics
Sample 9 Alternating pressures	1.	§4.1 Marking
	2.	§4.4 Protection against backflow
	3.	§2.6.10 Resistance to alternating pressure
	4.	§4.6.4 Upstream leaktightness

2.10.3 Sequence of tests for WC flush valves

Sample Sequence	Order	Tests
Sample 1 Materials	1.	§4.4.2A Materials (<i>Neutral salt spray test</i>)
Sample 2 Materials	1.	§4.4.2B Materials (<i>"air" thermal shock resistance test</i>)
Sample 3 Hydraulic	1.	§4.1 Marking
	2.	§4.4 Protection against backflow
	3.	§7.4 Dimension
	4.	§7.5 Hydraulic characteristics
	5.	§2.6.9 Verification of hydraulic operation under minimal pressure
	6.	§7.5.3 Flow rate/impact force test at reduced dynamic pressure
	7.	§7.5.4 Flow rate/volume test at reduced dynamic pressure
	8.	§7.5.5 Flow rate/impact force test at high dynamic pressure
	9.	§7.5.6 Water hammer
	10.	§2.6.8 Verification of electronic detection
	11.	§2.6.8.3 Verification of flow cut-off
	12.	§4.5.5 Operational safety (4.5.5.1 electrical tapware or 4.5.5.3 battery-operated taps)
Sample 4 Resistance pressure	4.	§4.1 Marking
	5.	§4.4 Protection against backflow
	6.	§4.7 Resistance to pressure
Sample 5 Endurance	13.	§4.1 Marking
	14.	§4.4 Protection against backflow
	15.	§4.6.4 Leaktightness of tapware upstream of the obturator
	16.	§4.6.5 Leaktightness of tapware downstream of the obturator
	17.	§7.7 Urinal endurance
	18.	§4.6.4 Leaktightness of tapware upstream of the obturator
	19.	§4.6.5 Leaktightness of tapware downstream of the obturator
	20.	§7.5 Hydraulic characteristic (NF EN 12541 reference)
	21.	§2.9.4 Endurance
	22.	§4.6.4 Leaktightness of tapware upstream of the obturator
	23.	§4.6.5 Leaktightness of tapware downstream of the obturator
	24.	§7.5 Hydraulic characteristic (NF EN 12541 reference)
Sample 6-7-8 Acoustics	5.	§4.1 Marking
	6.	§4.4 Protection against backflow
	7.	§7.8 Acoustic characteristic
	8.	§2.9.5 Class A for acoustics
Sample 9 Alternating pressures	5.	§4.1 Marking
	6.	§4.4 Protection against backflow
	7.	§2.6.10 Resistance to alternating pressure
	8.	§4.6.4 Upstream leaktightness

2.11 EChAU rating

The essential principle of the EChAU rating is that the different characteristics are independent of each other. The level of each characteristic is to be selected as needed. The highest level may apply for one characteristic, while the lowest level may apply for another.

2.11.1 Hydraulic or flow characteristic

2.11.1.1 Classification

Depending on their performance level, tapware can be classified as follows:

Class	Flow rate value
E00	$4 \text{ L/min} \leq q \leq 6 \text{ L/min}$
E02	$5 \text{ L/min} \leq q < 9 \text{ L/min}$
E0	$9 \text{ L/min} \leq q < 12 \text{ L/min}$
E1	$12 \text{ L/min} \leq q < 16 \text{ L/min}$
E2	$16 \text{ L/min} \leq q < 20 \text{ L/min}$
E3	$20 \text{ L/min} \leq q < 25.2 \text{ L/min}$
E4	$25.2 \text{ L/min} \leq q$

Depending on their level of performance, the valves have a score of type A, B, C, D.



Washbasin / bidet / sink faucets

Flow rate at 3 bar (L/min.)	4	6	8	10	12	14	16	18	20 and +
Rating	A			B		C		D	
Technical score if Comfort score = C0, C1, Ch2 or Ch3	E00			E0		E1		E2	
Technical score if Comfort score = C2 or C3	E0			E1		E2		E3	

2.11.1.2 Selection criteria

Flow rate class selection will be based on the supplied device; the building comfort level; the type of room to be equipped.

2.11.2 Comfort characteristics

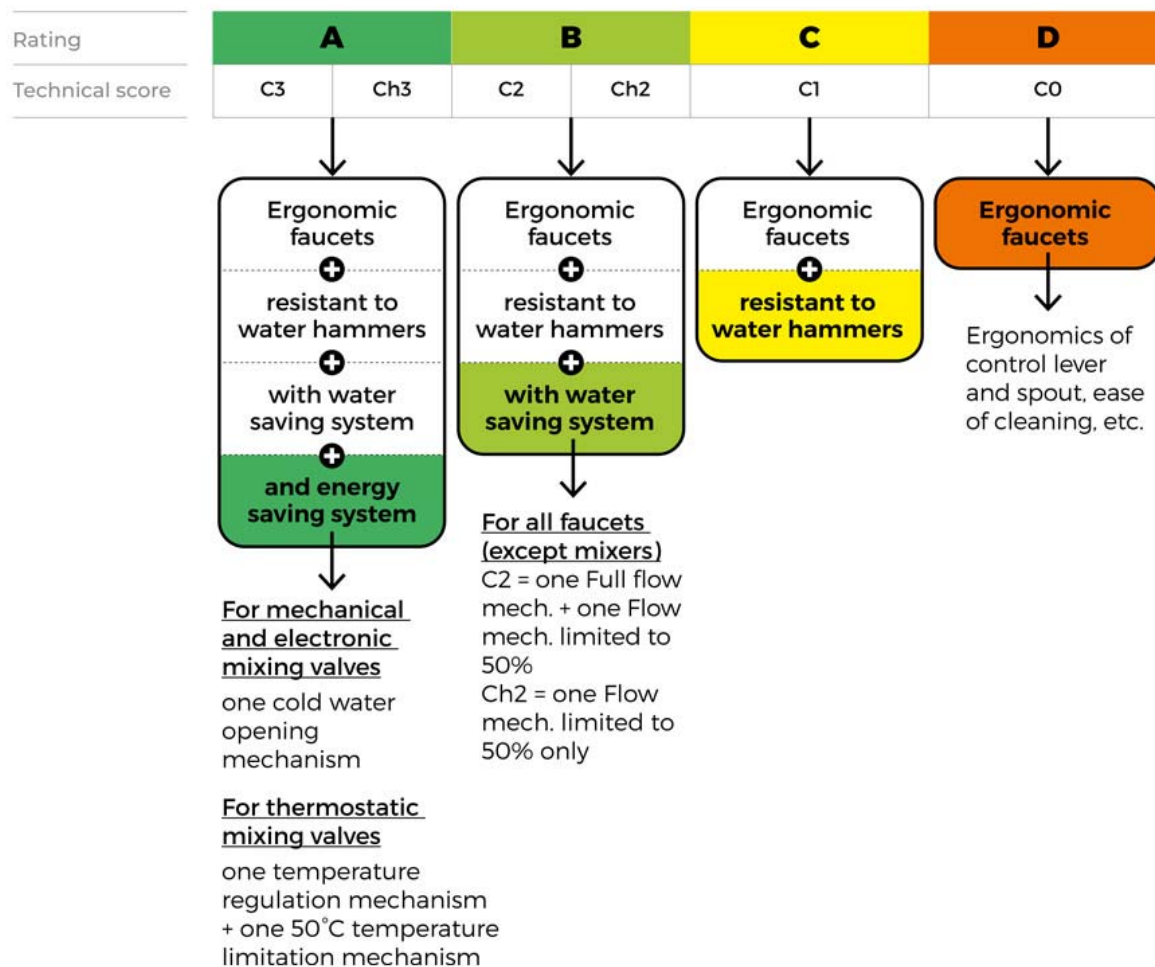
2.11.2.1 Classification

Depending on their performance level, tapware can be classified as follows:

Class	The tap must comply with the requirements of the following articles:		
	Tapware	Urinal valve	WC valve
Ch1	2.6.8 Electronic detection verification test 2.6.9 Verification of hydraulic operation 2.6.10 Alternating pressures		
	2.7.1 Dimensions 2.7.2 Hydraulic 2.7.6 Verification of installation system for fixed-spout single-hole taps		
Ch2	Meets the requirements of class Ch1 2.7.2.2 "Water saving" controlled flow rate	/	/

Depending on their level of performance, the valves have a score of type A, B, C, D.

Performance criterion C depends on the tapware design:



2.11.2.2 Selection criteria

The comfort class selection will mainly depend on the characteristics and use of the building.

2.11.3 Acoustic characteristic

2.11.3.1 Classification

Depending on their performance level, tapware can be classified as follows:

Acoustic group	Class	Lap
II	A1	20 dB (A) < Lap ≤ 30 dB (A)
I	A2	15 dB (A) < Lap ≤ 20 dB (A)
I	A3	Lap ≤ 15 dB (A)

Depending on their level of performance, the valves have a score of type A, B, C, D.

Noise level at 3 bar (dB(A))	5	10	15	20	25	30	35	40 and +
Rating	A			B	C		D	
Technical score	A3			A2	A1		A0	

2.11.3.2 Selection criteria

The acoustic class selection will mainly depend on the characteristics and use of the building.

2.11.4 Mechanical endurance or wear resistance characteristic

2.11.4.1 Classification

Depending on the actual level of wear resistance of its various components, tapware can be classified as follows:

Class	Number of cycles	
U3	Obturator (sanitary tapware)	500,000 cycles
	Obturator (flush valve)	175,000 cycles

Depending on their level of performance, the valves have a score of type A, B, C, D.

2.11.4.2 Selection criteria

U₀: this score is not possible for this rating because it is lower than the product standard.

U₁: use.

U₂: intensive use.

U₃: intensive use and use in harsh conditions.

For electronic opening and closing valves, only class U3 is possible for this classification

2.12 Example of EChAU rating

Washbasin tapware with a flow rate during use of 5 L/min that passes comfort level 2 tests, with an L_{ap} of 16 dB (A), and that passes the endurance tests (500,000 cycles (obturator)) will be classified as:

E ₀₀ Ch ₂ A ₂ U ₃

2.13 Rating presentation

2.13.1 Specific information for the catalogue or other commercial media

See Chapter 6.1 of the regulations for use of DT077-00.

The specific information on the methods for rating automatic opening and closing valves are as follows:

Flow	E	q L/min measured under 3 bar	E000	1.5 L/min ≤ q < 6 L/min	
			E00	4 L/min ≤ q ≤ 6 L/min	
			E02	5 L/min ≤ q < 9 L/min	
			E0	9 L/min ≤ q < 12 L/min	
			E1	12 L/min ≤ q < 16 L/min	
			E2	16 L/min ≤ q < 20 L/min	
			E3	20 L/min ≤ q < 25.2 L/min	
			E4	25.2 L/min ≤ q	
Comfort	Ch	Type	Ch1	For sanitary tapware Detection verification; Hydraulic operation; Alternate pressures; Dimension; Hydraulic characteristics; verification of the installation system for the fixed-spout single-hole taps For flush valves Detection verification, hydraulic operation, alternating pressures	
			Ch2	Water saving characteristics	
Acoustics	A	Lap dB (A)	A1	20 dB (A) < Lap ≤ 30 dB (A)	
			A2	15 dB (A) < Lap ≤ 20 dB (A)	
			A3	Lap ≤ 15 dB (A)	
Wear	U	Number of cycles	U3	Obturator (sanitary tapware)	500,000 cycles
				Obturator (flush valves)	175,000 cycles

2.13.2 Product information

See Chapter 6.2 of the regulations for use of DT077-00.

3 EChAU rating application

The rating application must be issued by the applicant/holder in one copy (**1 original on the applicant's letterhead paper in French or English**) according to the cases and models indicated below. All the documents are to be remitted to CSTB.

In the event that the product comes from a manufacturing unit located outside the European Economic Area, the applicant shall designate a representative within the European Economic Area who co-signs the application.

Note: Electronic versions of template letters and sheets may be obtained from CSTB.

The applicant produces a file that contains the elements described in the following table depending on the type of application.

Summary Applications Table

Type of application Elements	Initial application	Complementary application	Admission following a penalty of withdrawal	Suspension application	Renunciation application
Application and commitment letter	Standard letter 1A or 1B (for a representative)	Standard letter 2A or 2B (for a representative)	Standard sheet 7 specific items	Standard letter 5A or 5B (for a representative)	Standard letter 4A or 4B (for a representative)
Sales literature	YES	If applicable	YES	Instructions or extract from the catalogue	

3.1 For an initial rating application

The applicant shall prepare a dossier which includes:

- an application and commitment letter in accordance with standard letter 1 A.
- **if a representative**, application and commitment letter as per standard letter 1 B.

3.2 For a complementary rating application

The holder shall prepare a file containing the following:

- an application and commitment letter in accordance with standard letter 2 A.
- **if a representative**, application and commitment letter as per standard letter 2 B.

3.3 For a new rating application following a penalty of withdrawal of the EChAU rating

The holder shall prepare a file containing the following:

- specific items that all applicants must submit as part of a new admission application where the right of use has been withdrawn as a result of a sanction, using standard sheet 7.

3.4 For an application for the suspension of the EChAU rating

The holder shall prepare a file containing the following:

- a suspension letter as per standard letter 5 A.
- **if a representative**, a suspension letter as per standard letter 5 B.

3.5 For an application for renunciation of the EChAU rating

The holder shall prepare a file containing the following:

- a renunciation letter as per standard letter 6A.
- **if a representative**, a renunciation letter as per standard letter 6B.

STANDARD LETTER 1A
ECAU AND/OR EChAU RATINGS

ECAU OR EChAU RATING APPLICATION FORM
FOR APPLICANTS LOCATED IN THE EUROPEAN ECONOMIC AREA

(to be drawn up on the applicant's/holder's letterhead paper)

Centre Scientifique et Technique du Bâtiment
Direction Hydraulique et Equipements Sanitaires, (HES)
Division Robinetterie et Appareils Sanitaires (RAS)
For the attention of Mr. Laurent Rousseau
84, avenue Jean Jaurès
Champs sur Marne
F-77447 Marne La Vallée Cedex 2

Subject: **ECAU and/or EChAU rating admission application**
Attachment(s): a technical file.

Dear Sir, Madam,

I would like to request an ECAU and/or EChAU rating:

- for the following product/range of products: (detailed list of the product/range of products or specify "as set out in the list included with this application");
- produced at the following production unit: (company name, address);
- and for the following trade name: (trademark and/or specific trade reference, which may be on the list included with this application).

For this purpose, I declare that I have read and accept technical document 077 associated with this rating and undertake to comply with it and to inform my commercial network during the entire validity period of the ECAU and/or EChAU rating and in particular to comply without restrictions or reservations with the decisions made by CSTB.

Yours faithfully,

**Date, signature and name in full of the
applicant/holder's legal representative**

STANDARD LETTER 1B
ECAU AND/OR EChAU RATING

ECAU OR EChAU RATING APPLICATION AND/OR EChAU RATING
FOR APPLICANTS LOCATED OUTSIDE OF THE EUROPEAN ECONOMIC AREA

(to be drawn up on the applicant's/holder's letterhead paper)

Centre Scientifique et Technique du Bâtiment (CSTB)
Direction Hydraulique et Equipements Sanitaires, (HES)
Division Robinetterie et Appareils Sanitaires (RAS)
For the attention of Mr. Laurent Rousseau
84, avenue Jean Jaurès
Champs sur Marne
F-77447 Marne La Vallée Cedex 2

Subject: **ECAU and/or EChAU rating admission application (with representative)**
Attachment(s): a technical file.

Dear Sir, Madam,

I would like to request an ECAU and/or EChAU rating:

- for the following product/range of products: (detailed list of the product/range of products or specify "as set out in the list included with this application");
- produced at the following production unit: (company name, address);
- and for the following trade name: (trademark and/or specific trade reference, which may be on the list included with this application).

For this purpose, I declare that I have read and accept technical document 077 associated with this rating and undertake to comply with it and to inform my commercial network during the entire validity period of the ECAU and/or EChAU rating and in particular to comply without restrictions or reservations with the decisions made by CSTB.

Furthermore, I appoint the Company (company name), (company legal form), (registered office) represented by Mr/Ms (name of the legal representative) in that person's capacity as (position) to represent me in the European Economic Area for all matters relative to ECAU and/or EChAU ratings.

I undertake to immediately notify CSTB of any new appointment of the representative designated above.

In this regard, I request that the expenses that are to be borne by me be invoiced directly to the representative. They will make the payments on my behalf and in my name as soon as the invoices are received, as agreed when accepting the role of representative.

Yours faithfully,

Date, signature and name in full of the applicant's legal representative

preceded by the handwritten wording "Approving representation"

Date, signature and name in full of the representative in the European Economic Area

preceded by the handwritten wording "Accepting representation".

STANDARD LETTER 2A
ECAU AND/OR EChAU RATINGS

COMPLEMENTARY APPLICATION FORM FOR ECAU AND/OR EChAU RATING
FOR APPLICANTS LOCATED IN THE EUROPEAN ECONOMIC AREA

(to be drawn up on the applicant's/holder's letterhead paper)

Centre Scientifique et Technique du Bâtiment (CSTB)
Direction Hydraulique et Equipements Sanitaires, (HES)
Division Robinetterie et Appareils Sanitaires (RAS)
For the attention of Mr. Laurent Rousseau
84, avenue Jean Jaurès
Champs sur Marne
F-77447 Marne La Vallée Cedex 2

Subject: **Complementary application for the ECAU and/or EChAU rating**
Attachment(s): a technical file.

Dear Sir, Madam,

As holder of the ECAU and/or EChAU rating for the product(s) of our manufacture identified below:

- designation of the product(s):
- production unit:
- right of use granted on (date) and bearing the following number: (number of valid certificate)

I am writing to apply for the ECAU and/or EChAU rating for the following product/range of products that we manufacture:

- detailed list of the product/range of products:
- specific trade reference:

(This information may be included in a list attached to this application)

For an extension application, please provide the information below:

This product deviates from the certified product/range of products due to the following modifications:
<description of the modifications>.

The product/range of products for which I am seeking an extension will replace the certified product listed above:

- NO (1);
- YES (1).

I declare that the products/product range covered by this application are, with relation to the other characteristics, strictly in conformity with the products/product range already certified and manufactured under the same conditions.

For this purpose, I declare that I have read and accept technical document 077 associated with this rating and undertake to comply with it and to inform my commercial network during the entire validity period of the ECAU and/or EChAU rating and in particular to comply without restrictions or reservations with the decisions made by CSTB.

Yours faithfully,

Date, signature and name in full
of the applicant/holder's legal representative

(1) Delete as appropriate.

STANDARD LETTER 2B
ECAU AND/OR EChAU RATINGS

**COMPLEMENTARY APPLICATION FORM FOR ECAU AND/OR EChAU RATING
FOR APPLICANTS LOCATED OUTSIDE OF THE EUROPEAN ECONOMIC AREA**

(to be drawn up on the applicant's/holder's letterhead paper)

Centre Scientifique et Technique du Bâtiment (CSTB)
Direction Hydraulique et Equipements Sanitaires, (HES)
Division Robinetterie et Appareils Sanitaires (RAS)
For the attention of Mr. Laurent Rousseau
84, avenue Jean Jaurès
Champs sur Marne
F-77447 Marne La Vallée Cedex 2

Subject: **Complementary application for the ECAU and/or EChAU rating (with a representative)**
Attachment(s): a technical file.

Dear Sir, Madam,

As holder of the ECAU and/or EChAU rating for the product(s) of our manufacture identified below:

- designation of the product(s):
- production unit:
- right of use granted on (date) and bearing the following number: (number of valid certificate)

I am writing to apply for the ECAU and/or EChAU rating for the following product/range of products that we manufacture:

- detailed list of the product/range of products:
- specific trade reference:

(This information may be included in a list attached to this application)

For an extension application, please provide the information below:

This product deviates from the certified product/range of products due to the following modifications: <description of the modifications>.

The product/range of products for which I am seeking an extension will replace the certified product listed above:

- NO (1);
- YES (1).

I declare that the products/product range covered by this application are, with relation to the other characteristics, strictly in conformity with the products/product range already certified and manufactured under the same conditions.

For this purpose, I declare that I have read and accept technical document 077 associated with this rating and undertake to comply with it and to inform my commercial network during the entire validity period of the ECAU and/or EChAU rating and in particular to comply without restrictions or reservations with the decisions made by CSTB.

Furthermore, I appoint the Company (company name), (company legal form), (registered office) represented by Mr/Ms (name of the legal representative) in that person's capacity as (position) to represent me in the European Economic Area for all matters relative to ECAU and/or EChAU ratings.

I undertake to immediately notify CSTB of any new appointment of the representative designated above.

In this regard, I request that the expenses that are to be borne by me be invoiced directly to the representative. They will make the payments on my behalf and in my name as soon as the invoices are received, as agreed when accepting the role of representative.

Yours faithfully,

**Date, signature and name in full
of the applicant's legal representative**

preceded by the handwritten wording "Approving representation"

**Date, signature and name in full
of the representative in the European Economic Area**

preceded by the handwritten wording "Accepting representation".

(1) Delete as appropriate.

STANDARD LETTER 4A
ECAU AND/OR EChAU RATINGS

**APPLICATION FORM FOR RENUNCIATION OF THE ECAU AND/OR EChAU RATING
FOR APPLICANTS LOCATED IN THE EUROPEAN ECONOMIC AREA**

(to be drawn up on the applicant's/holder's letterhead paper)

Centre Scientifique et Technique du Bâtiment (CSTB)
Direction Hydraulique et Equipements Sanitaires, (HES)
Division Robinetterie et Appareils Sanitaires (RAS)
For the attention of Mr. Laurent Rousseau
84, avenue Jean Jaurès
Champs sur Marne
F-77447 Marne La Vallée Cedex 2

Subject: **Application for renunciation of the ECAU and/or EChAU rating**

Dear Sir, Madam,

As holder of the ECAU and/or EChAU rating, I would like to renounce the ECAU and/or EChAU rating for the product(s) that we manufacture identified by the following references:

- designation of the product(s):
- manufacturing unit: (company name, address):
- brand name:
- commercial reference:
- date of ECAU and/or EChAU rating admission: or certificate No.:

for the following reasons:

-

for a maximum duration of 6 months, renewable once.

Manufacturing is due to cease on:

The inventories of these products with packaging marked ECAU or EChAU are the following:

The anticipated time it will take to deplete them is:

Yours faithfully,

**Date, signature and name in full of the holder's
legal representative**

**STANDARD LETTER 4 B
ECAU AND/OR EChAU RATINGS**

(to be drawn up on the distributor's letterhead)

**APPLICATION FOR RENUNCIATION OF THE ECAU AND/OR EChAU RATING WITH A
REPRESENTATIVE
FOR APPLICANTS LOCATED OUTSIDE OF THE EUROPEAN ECONOMIC AREA**

For the attention of Mr Laurent Rousseau
Division Robinetterie et Appareils Sanitaires (Tapware
and Sanitaryware Division)
Direction HES
CSTB
84 avenue Jean Jaurès
CHAMPS-SUR-MARNE
77447 MARNE LA VALLEE CEDEX 2 (France)

Subject: **Application for renunciation of the ECAU and/or EChAU rating with a representative**

Dear Sir, Madam,

As holder of the ECAU and/or EChAU rating, I would like to renounce the ECAU and/or EChAU rating for the product(s) that we manufacture identified by the following references:

1. designation of the product(s):
2. manufacturing unit: (company name, address):
3. brand name:
4. commercial reference:
5. date of ECAU and/or EChAU rating admission or admission no.:

for the following reasons:

Manufacturing is due to cease on:

The inventories of these products with packaging marked ECAU or EChAU are the following:

The expected time for their depletion is:

Yours faithfully,

**Date and signature of the holder's legal
representative**

**Date and signature of the representative in the
European Economic Area**

STANDARD LETTER 5A
ECAU AND/OR EChAU RATINGS

**APPLICATION FORM FOR SUSPENSION OF THE ECAU AND/OR EChAU RATING
FOR APPLICANTS LOCATED IN THE EUROPEAN ECONOMIC AREA**

(to be drawn up on the applicant's/holder's letterhead paper)

Centre Scientifique et Technique du Bâtiment (CSTB)
Direction Hydraulique et Equipements Sanitaires, (HES)
Division Robinetterie et Appareils Sanitaires (RAS)
For the attention of Mr. Laurent Rousseau
84, avenue Jean Jaurès
Champs sur Marne
F-77447 Marne La Vallée Cedex 2

Subject: **Application for suspension of the ECAU and/or EChAU rating**

Dear Sir, Madam,

As holder of the ECAU and/or EChAU rating, I would like to request the suspension of the ECAU and/or EChAU rating for the product(s) that we manufacture identified by the following references:

- designation of the product(s):
- manufacturing unit: (company name, address):
- brand name:
- commercial reference:
- date of ECAU and/or EChAU rating admission: or certificate No.:

for the following reasons:

-

for a maximum duration of 6 months, renewable once.

Manufacturing is due to cease on:

The inventories of these products with packaging marked ECAU or EChAU are the following:

The anticipated time it will take to deplete them is:

Yours faithfully,

**Date, signature and name in full of the holder's
legal representative**

STANDARD LETTER 5B
ECAU AND/OR EChAU RATINGS

**APPLICATION FORM FOR SUSPENSION OF THE ECAU AND/OR EChAU RATING
FOR APPLICANTS LOCATED OUTSIDE OF THE EUROPEAN ECONOMIC AREA**

(to be drawn up on the applicant's/holder's letterhead paper)

Centre Scientifique et Technique du Bâtiment (CSTB)
Direction Hydraulique et Equipements Sanitaires, (HES)
Division Robinetterie et Appareils Sanitaires (RAS)
For the attention of Mr. Laurent Rousseau
84, avenue Jean Jaurès
Champs sur Marne
F-77447 Marne La Vallée Cedex 2

Subject: **Application for suspension of the ECAU and/or EChAU rating (with a representative)**

Dear Sir, Madam,

As holder of the ECAU and/or EChAU rating, I would like to request the suspension of the ECAU and/or EChAU rating for the product(s) that we manufacture identified by the following references:

- designation of the product(s):
- manufacturing unit: (company name, address):
- brand name:
- commercial reference:
- date of ECAU and/or EChAU rating admission: or certificate No.:

for the following reasons:

2.

for a maximum duration of 6 months, renewable once.

Manufacturing is due to cease on:

The inventories of these products with packaging marked ECAU or EChAU are the following:

The anticipated time it will take to deplete them is:

Yours faithfully,

**Date, signature and name in full of the holder's
legal representative**

**Date, signature and name in full of the
representative in the European Economic Area**

STANDARD SHEET 7
ECAU AND/OR EChAU RATING

SPECIFIC ITEMS ALL APPLICANTS (INDUSTRIALISTS, IMPORTERS, DISTRIBUTORS, ETC.) MUST PRODUCE AS PART OF A NEW ADMISSION APPLICATION WHEN THE RATING HAS BEEN WITHDRAWN AS A RESULT OF A SANCTION

In the event of an act of deceptive commercial practice under Articles L 121-2 to L121-5 of the Consumer Code (indication of a false rating of a certified product or a false label).

The applicant is responsible for determining and carrying out a course of action that will fully address and remedy the causes and consequences of their commitments as regards the correct usage of the certification mark.

ACTIONS	MINIMUM PROOF TO BE SUPPLIED BY THE CSTB APPLICANT SHOWING THE ACTIONS THEY HAVE UNDERTAKEN TO FULLY ADDRESS AND REMEDY THE CAUSES AND CONSEQUENCES	VALIDITY OF THE PROOF RECEIVED
CURATIVE ACTIONS	<ul style="list-style-type: none"> ➤ A list of those affected including full contact details (customers, prospects, technical controllers, etc.) who have received false attestations/false certificates; failing that, a list of those affected (customers, prospects, technical controllers, etc.) who have been contacted over the preceding 24 months. 	<input type="checkbox"/> List sent <input type="checkbox"/> List not sent <i>Comments:</i>
	<ul style="list-style-type: none"> ➤ List of customers, including full contact details, who have received products with inappropriately marked packaging information; otherwise, the list of customers of the past 24 months. 	<input type="checkbox"/> List sent <input type="checkbox"/> List not sent <i>Comments:</i>
	<ul style="list-style-type: none"> ➤ Letter written by the Applicant's manager informing those affected of the invalidity of the false attestations/false certificates they have been sent. 	<p><i>CSTB will verify that this action has been carried out by contacting 5% of those affected or at least 5 customers and technical controllers.</i></p> <input type="checkbox"/> Letter of information duly implemented, corroborated by those affected <input type="checkbox"/> Letter of information not implemented or partially implemented <i>Comments:</i>
	<ul style="list-style-type: none"> ➤ Letter written by the Applicant's manager informing the customers of products that are inappropriately marked or products bearing the certification mark(s). 	<p><i>CSTB will verify that this action has been carried out by contacting 5% of the customers or at least 5 customers</i></p> <input type="checkbox"/> Letter of information duly implemented, corroborated by those affected <input type="checkbox"/> Letter of information not implemented or partially implemented <i>Comments:</i>
	<ul style="list-style-type: none"> ➤ Action undertaken against the person or persons responsible for approving and issuing the false attestations/false certificates and/or delivering inappropriately marked products. 	<input type="checkbox"/> Action is relevant <input type="checkbox"/> Action is not relevant <i>Comments:</i>

4 Prices

The purpose of this chapter is to determine the amount due for services related to the ECAU and EChAU ratings and describe the terms of payment.

The ECAU and EChAU ratings include the following services:

- Development, examination of application and implementation of ECAU and/or EChAU ratings;
- Operation of ECAU and/or EChAU ratings;
- Testing.

4.1 Services related to the ECAU and EChAU ratings

Nature of the service	Definition of the service	Paying for the services
<p><u>Management:</u> Development and implementation of ratings, examination of the rating application</p>	<p>Participation in the implementation of the ratings, including preparation of the associated technical document.</p> <p>Services including examination of application files, relations with applicants, laboratories and assessment of inspection results.</p>	<p>- <i>Initial/complementary application: See § 4.2.1</i></p>
<p><u>Management:</u> Rating operation</p>	<p>Services including management of rating files, relations with holders, laboratories, publication of ratings data on certificates, assessment of inspection results.</p>	<p>- <i>Monitoring: See § 4.2.2</i></p>
<p>Tests</p>	<p>Laboratories' testing services</p>	<p>The laboratories' price lists are provided upon request.</p> <p>The applicant/holder supplies samples free of charge and makes them available at the laboratory's address.</p> <p>The costs related to the import duties and taxes are to be borne by the test applicant; the applicant shall pay all duties and taxes before sending the samples.</p> <p>- <i>Initial/complementary application: See § 4.2.1</i></p> <p>- <i>Monitoring: See § 4.2.2</i></p>

4.2 Paying for the services

4.2.1 Initial application/complementary application

Management and testing fees related to examination services are invoiced in the framework of an initial or complementary ECAU and/or EChAU rating application. They are payable in one instalment, at the time at which the application is filed, for official registration.

Such fees will remain payable even if the ECAU and/or EChAU rating is not granted or extended or if the application is withdrawn during the examination.

4.2.2 Monitoring

Fees for annual services related to management and testing of ECAU and/or EChAU ratings are invoiced during the first quarter of each year and will remain payable in the event of non-renewal, withdrawal, cancellation or suspension of the ECAU and/or EChAU rating during the year.

4.2.3 Non-payment of amounts due

The applicant or holder of the ECAU and/or EChAU rating must pay all fees in accordance with the established terms of payment. Any failure on their part is an obstacle to the fulfilment by CSTB of the responsibilities of inspection and corrective action that are incumbent upon it hereunder.

If a first official notice by registered letter with acknowledgement of receipt does not result in the payment of all amounts due within one month, any established penalties may be applied for all of the products accepted for such holder.

4.3 Prices

Prices are reviewed annually, in the form of a price list drawn up by CSTB. This revision is reported by CSTB.

If holders refuse to recognise the annual revision of fees, they shall be deemed to have voluntarily terminated the ratings for their products.

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