Building valves - Hydraulic safety groups - Tests and requirements

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NATIONAL FOREWORD

See Eesti standard EVS-EN 1487:2014 sisaldab Euroopa standardi EN 1487:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 1487:2014 consists of the English text of the European standard EN 1487:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 09.07.2014.	Date of Availability of the European standard is 09.07.2014.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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Building valves - Hydraulic safety groups - Tests and requirements

Robinetterie de bâtiment - Groupes de sécurité hydraulique - Essais et exigences

Gebäudearmaturen - Hydraulische Sicherheitsgruppen - Prüfungen und Anforderungen

This European Standard was approved by CEN on 22 May 2014.

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Contents

Page

Foreword

This document (EN 1487:2014) 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of an identical text or by endorsement, at the latest by January 2015, and conflicting national standards shall be withdrawn at the latest by January 2015.

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 1487:2000.

The main changes compared to EN 1487:2000 are as follows:

a) the Scope has been modified to nominal sizes DN 15 to DN 25;

b) Normative references were updated;

c) Terms and definitions were changed;

d) subclause 4.1 (general wording for materials) was modified;

e) subclauses 4.3 (Detection of residual stress), 4.4 (Outside visible surfaces), 4.5 (Corrosion resistance), 4.6 (Coating adherence) and 4.7 (Compatibility with the products used for disinfection of the networks) were added;

f) subclauses 5.2 (Dimensional characteristics), 5.3 (Test port) and 5.4 (Pressure tapping) were modified;

g) subclause 5.7 (Other threads) was deleted;

h) subclauses 5.8 (Replacing of the safety valve) and 5.9 (Check valve) were added;

i) Clause 6 (Apparatus) was added, thus renumbering of the following clauses was necessary;

j) Clause 7 (Hydraulic tests and requirements) was modified;

k) Clause 8 (Acoustic tests and requirements) was moved to Clause 11 and modified editorially;

l) Clause 9 (Tests and requirements of the components of the hydraulic safety group) was modified;

m) Clause 10 (Resistance to thermal shocks) was added;

n) Clause 12 (Classification) was modified;

o) Clause 13 (Designation) was modified editorially;

p) Clause 15 (Technical documents, presentation at delivery) was added;

q) informative Annex A was replaced by informative Annex A (Test sequences).

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.

Introduction

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

a) 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.

b) It should be noted that, whilst 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 specifies dimensions, materials and performance requirements (including methods of test) for hydraulic safety groups, of nominal sizes from DN 15 to DN 25, having working pressures[1)] from 0,1 MPa (1 bar) to 0,7 MPa (7 bar). Hydraulic safety groups are intended for fitting to the potable water supply of storage water heaters, having a maximum storage temperature of 95°C.

Hydraulic safety groups limit the pressure in hot water heaters, prevent the backflow of water into the main circuit and prevent the discharged water to get into contact with the water in the water heater.

Hydraulic safety groups do not control the temperature. They ensure the hydraulic safety of water heaters if the mechanical resistance of the water heater remains at least equal to the rating pressure.

NOTE The use of the device specified in this European Standard does not override the need to use controls (e.g. thermostats and cut-outs) which act directly on the power sources of water heaters.

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 248:2002, *Sanitary tapware - General specification for electrodeposited coatings of Ni-Cr*

EN 806-1, *Specifications for installations inside buildings conveying water for human consumption - Part 1: General*

EN 806-2, *Specification for installations inside buildings conveying water for human consumption - Part 2: Design*

EN 806-3, *Specifications for installations inside buildings conveying water for human consumption - Part 3: Pipe sizing - Simplified method*

EN 806-4, *Specifications for installations inside buildings conveying water for human consumption - Part 4: Installation*

EN 806-5, *Specifications for installations inside buildings conveying water for human consumption - Part 5: Operation and maintenance*

EN 1488, *Building valves - Expansion groups - Tests and requirements*

EN 1567, *Building valves - Water pressure reducing valves and combination water pressure reducing valves - Requirements and tests*

EN 1717:2000, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

EN 10226-1, *Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

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

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1) All pressures are gauge unless otherwise stated.

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 3822-3, *Acoustics - Laboratory tests on noise emission from appliances and equipment used in water supply installations - Part 3: Mounting and operating conditions for in-line valves and appliances (ISO 3822-3)*

EN ISO 4628-3, *Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting (ISO 4628-3)*

EN ISO 6509, *Corrosion of metals and alloys - Determination of dezincification resistance of brass (ISO 6509)*

ISO 6957, *Copper alloys — Ammonia test for stress corrosion resistance*

3 Terms and definitions

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

3.1
hydraulic safety group
safety device that limits the pressure in hot water heaters, prevents the backflow of water into the main circuit, prevents the discharged water from coming into contact with the water in the water heater, allows the function of the backflow prevention to be controlled and isolates and drains the water heater for maintenance services

Note 1 to entry: A hydraulic safety group is comprised of at least the following items in a single unit, in an upstream to downstream order, as shown in Table 1.

Table 1 — Components of hydraulic safety groups

	DN 15	DN 20	DN 25
isolating valve	1	1	1
test port for monitoring the check valve	1	1	1
check valve	1	1	1
isolating valve	1[a]	1[a]	1[a]
additional outlet connection	1[a]	1[a]	1[a]
pressure safety valve	1	1	1
drain device or drain function	1	1	1
air break to drain	1	1	1
pressure tapping	1[a]	1[a]	1[a]
[a] Optional.			

3.2
isolating valve
valve that allows the water heater to be isolated from the potable water supply

Note 1 to entry: If a second valve is fitted, it is placed between the check valve and safety valve.