

SLOVENSKI STANDARD

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Energijske lastnosti stavb - Metoda za izračun energijskih zahtev in učinkovitosti sistema - 5. del: Sistemi za ogrevanje prostora in shranjevanje tople sanitarne vode (brez hlajenja) - Modula M3-7 in M8-7

Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 5: Space heating and DHW storage systems (not cooling), Module M3-7, M8-7

Energetische Bewertung von Gebäuden - Verfahren zur Berechnung der Energieanforderungen und Nutzungsgrade der Anlagen -Teil 5: Raumheizung und Speichersysteme für erwärmtes Trinkwasser (keine Kühlung), Modul M3-7, M8-7

Performance énergétique des bâtiments - Méthode de calcul des besoins énergétiques et des rendements des systèmes - Partie 5 : Systèmes de stockage pour le chauffage et l'eau chaude sanitaire (sans refroidissement), Module M3-7, M8-7

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**Energy performance of buildings - Method for calculation
of system energy requirements and system efficiencies -
Part 5: Space heating and DHW storage systems (not
cooling), Module M3-7, M8-7**

Performance énergétique des bâtiments - Méthode de
calcul des besoins énergétiques et des rendements des
systèmes - Partie 5 : Systèmes de stockage pour le
chauffage et l'eau chaude sanitaire (sans
refroidissement), Module M3-7, M8-7

Energetische Bewertung von Gebäuden - Verfahren zur
Berechnung der Energieanforderungen und
Nutzungsgrade der Anlagen - Teil 5: Raumheizung und
Speichersysteme für erwärmtes Trinkwasser (keine
Kühlung), Modul M3-7, M8-7

This European Standard was approved by CEN on 6 July 2025.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 15316-5:2025) has been prepared by Technical Committee CEN/TC 228 “Heating systems and water based cooling systems in buildings”, the secretariat of which is held by DIN.

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 2026, and conflicting national standards shall be withdrawn at the latest by March 2026.

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

This document supersedes EN 15316-5:2017.

The main changes compared to EN 15316-5:2017 are:

- 1) inclusion of simultaneous heating of the storage;
- 2) inclusion of arbitrary layer volume selection;
- 3) inclusion of additional heat losses due to the pipe internal circulation in storage connections;
- 4) calculation procedure for method A and B have been reviewed and several changes implemented;
- 5) Annex A contains a template for the data and parameters used in the standards and Annex B a set of default values. Default values given in Annex B may be overridden by a national annex;
- 6) the previous Annexes C and D have been withdrawn;
- 7) inclusion of calculation approach for solving the re-arranging the layer temperatures in method A in determined number of steps.

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Introduction

This document is part of a series of standards aiming at international harmonization of the methodology for the assessment of the energy performance of buildings, called “set of EPB standards”.

All EPB standards follow specific rules to ensure overall consistency, unambiguity and transparency.

All EPB standards provide a certain flexibility with regard to the methods, the required input data and references to other EPB standards, by the introduction of a normative template in Annex A and Annex B with informative default choices.

EPB standards deal with energy performance calculation and other related aspects (like system sizing) to provide the building services considered in the EPBD.

CEN/TC 228 deals with water based heating and cooling systems in buildings. Subjects covered by CEN/TC 228 are:

- energy performance calculation for heating and cooling systems;
- inspection of heating systems;
- design of heating systems and water based cooling systems;
- installation and commissioning of heating systems.

This document specifies two methods to take into account the energy performance of storage systems for heating of domestic hot water and/or space heating coupled to generation system(s) producing hot water or using independent energy input to the storage unit. This document presents two methods applicable to the different types of water based storage system and related controls systems:

- method A applies when the hot water is thermally stratified;
- method B applies when the hot water contained in the storage unit(s) is thermally homogeneous.

For the correct use of this document, Annex A specifies the required choices and input data. Default choices and input data are presented in Annex B. In case the standard is used in the context of national or regional legal requirements, mandatory choices may be given at national or regional level for such specific applications, in particular for the application within the context of EU Directives transposed into national legal requirements. These choices can be made available as National Annex or as separate (e.g. legal) document. If the default values and choices in Annex A are not followed due to national regulations, policy or traditions, it is expected that:

- either the national standardization body will consider the possibility to add or include a National Annex in agreement with the template of Annex A;
- or the national or regional authorities will, in the building regulations, reference the standard and prepare data sheets containing the national or regional choices and values, in agreement with the template of Annex A.

This updated standard covers hourly calculation intervals (or shorter).