

Water based surface embedded heating and cooling systems - Part 1: Definitions and symbols

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ICS 01.040.91, 01.075, 91.140.10

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EUROPEAN STANDARD

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NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 01.040.91; 01.075; 91.140.10

Supersedes EN 1264-1:2011

English Version

Water based surface embedded heating and cooling systems - Part 1: Definitions and symbols

Systèmes de surfaces chauffantes et rafraîchissantes hydrauliques intégrées - Partie 1: Définitions et symboles

Raumflächenintegrierte Heiz- und Kühlsysteme mit Wasserdurchströmung - Teil 1: Definitionen und Symbole

This European Standard was approved by CEN on 12 April 2021.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Contents	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
3.1 System description	5
3.2 Parameters of design	6
3.3 Thermal output	7
3.4 Surface temperatures	9
3.5 Temperatures of the heating/cooling medium	10
3.6 Flow rates	12
3.7 Characteristic curves	12
4 Symbols and abbreviations	13
4.1 Symbols	13
4.2 Abbreviations	17
Annex A (normative) Types of embedded heating and cooling systems	18
A.1 General	18
A.2 Examples of Types	19
Bibliography	30

European foreword

This document (EN 1264-1:2021) has been prepared by Technical Committee CEN/TC 130 “Space heating appliances without integral heat sources”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by November 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

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 1264-1:2011.

The main changes compared to the previous edition are listed below:

- a) Clarification of Scope;
- b) Improved wording;
- c) Specification of the definition of embedded heating and cooling systems;
- d) Expansion of the types of embedded heating and cooling systems;
- e) Deletion, modification and addition of several terms and definitions;
- f) Updated references.

EN 1264, *Water based surface embedded heating and cooling systems*, consists of the following parts:

- *Part 1: Definitions and symbols;*
- *Part 2: Floor heating: Methods for the determination of the thermal output using calculations and experimental tests;*
- *Part 3: Dimensioning;*
- *Part 4: Installation;*
- *Part 5: Determination of the thermal output for wall and ceiling heating and for floor, wall and ceiling cooling.*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

The EN 1264 series gives guidelines for surface embedded heating and cooling systems installed in buildings, residential and non-residential (e.g. office, public, commercial and industrial buildings) and focuses on systems installed for the purpose of thermal comfort.

The EN 1264 series gives guidelines for water based heating and cooling systems embedded into the enclosure surfaces of the room to be heated or to be cooled. It also specifies the use of other heating media instead of water, as appropriate.

The EN 1264 series specifies standardized product characteristics by calculation and testing the thermal output of heating for technical specifications and certification. For the design, construction and operation of these systems, see EN 1264-3 and EN 1264-4 for the types A, B, C, D, H, I and J. For the types E, F and G, see the EN ISO 11855 series.

The systems specified in the EN 1264 series are adjoined to the structural base of the enclosure surfaces of the building, mounted directly or with fixing supports. The EN 1264 series does not specify ceiling systems mounted in a suspended ceiling with a designed open air gap between the system and the building structure which allows the thermally induced circulation of the air. The thermal output of these systems can be determined according to the EN 14037 series and EN 14240.

EN 1264-1 specifies system types and characteristics of water based surface embedded radiant heating and cooling systems.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1264-2:2021, *Water based surface embedded heating and cooling systems — Part 2: Floor heating: Methods for the determination of the thermal output using calculations and experimental tests*

EN 1264-4:2021, *Water based surface embedded heating and cooling systems — Part 4: Installation*

EN 1264-5:2021, *Water based surface embedded heating and cooling systems — Part 5: Heating and cooling surfaces embedded in floors, ceilings and walls — Determination of the thermal output*

EN ISO 11855 (all parts), *Building environment design — Design, dimensioning, installation and control of embedded radiant heating and cooling systems*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>