ILNAS

Institut luxembourgeois de la normalisation
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ILNAS-EN 14037-1:2016

Free hanging heating and cooling surfaces for water with a temperature below 120°C - Part 1: Pre-fabricated ceiling mounted radiant panels for

Panneaux rayonnants de chauffage et de rafraîchissement alimentés avec une eau à une température inférieure à 120 °C - Partie 1 : Panneaux rayonnants de

An der Decke frei abgehängte Heiz- und Kühlflächen für Wasser mit einer Temperatur unter 120 °C - Teil 1: Vorgefertigte Deckenstrahlplatten zur

09/2016

National Foreword

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 14037-1

September 2016

ICS 91.140.10; 91.140.30

Supersedes EN 14037-1:2003

English Version

Free hanging heating and cooling surfaces for water with a temperature below 120°C - Part 1: Pre-fabricated ceiling mounted radiant panels for space heating - Technical specifications and requirements

Panneaux rayonnants de chauffage et de rafraîchissement alimentés avec une eau à une température inférieure à 120 °C - Partie 1 : Panneaux rayonnants de plafond préfabriqués destinés au chauffage des locaux - Spécifications techniques et exigences

An der Decke frei abgehängte Heiz- und Kühlflächen für Wasser mit einer Temperatur unter 120 °C - Teil 1: Vorgefertigte Deckenstrahlplatten zur Raumheizung - Technische Spezifikationen und Anforderungen

This European Standard was approved by CEN on 19 March 2016.

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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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COMITÉ EUROPÉEN DE NORMALISATION
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Ref. No. EN 14037-1:2016 E

Contents

European foreword

This document (EN 14037-1:2016) 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 document supersedes EN 14037-1:2003.

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 2017, and conflicting national standards shall be withdrawn at the latest by June 2018.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports basic work requirements of Regulation (EU) No. 305/2011.

For relationship with Regulation (EU) No. 305/2011, see informative Annex ZA, which is an integral part of this document.

The main changes are:

— the title has been changed,

— the introduction has been changed,

— the scope has been changed,

— new definitions have been added,

— the Annex ZA has been adapted.

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, 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

This European Standard results from the recognition, that heated and chilled ceiling radiant panels falling into the field of application hereinafter stated are traded on the basis of their thermal output. For evaluating and comparing different heated and chilled ceiling surfaces it is therefore necessary to refer to a heating stipulated value.

As installations with ceiling mounted radiant panels can also be used in practice for space cooling, it is necessary to have a test method for evaluating the cooling capacity. Installations with different free hanging heating and cooling surfaces need, for the use of space heating a test method for evaluating the heating output. The test method differs from the method for ceiling mounted radiant panels.

The European Standard EN 14037, *Free hanging heating and cooling surfaces for water with a temperature below 120°C*, consists of the following parts:

— *Part 1: Pre-fabricated ceiling mounted radiant panels for space heating - Technical specifications and requirements;*

— *Part 2: Pre-fabricated ceiling mounted radiant panels for space heating - Test method for thermal output;*

— *Part 3: Pre-fabricated ceiling mounted radiant panels for space heating - Rating method and evaluation of radiant thermal output;*

— *Part 4: Pre-fabricated ceiling mounted radiant panels for space heating - Test method for cooling capacity;*

— *Part 5: Open or closed heated ceiling surfaces - Test method for thermal output.*

1 Scope

This European Standard defines technical specifications and requirements of free hanging pre-fabricated ceiling mounted radiant panels with an air gap between construction and the emitter (not embedded) fed with water at temperatures below 120 °C connected with a centralized heating supply source intended to be installed in buildings.

The panels should be installed with an upper insulation.

The European Standard does not apply to independent heating devices.

The European Standard also defines the additional common data that the manufacturer has to provide to the trade in order to ensure the correct application of the products.

This European standard does not cover the performance of hanging accessories.

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 13501-1, *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

EN 14037-2:2016, *Free hanging heating and cooling surfaces for water with a temperature below 120°C – Part 2: Pre-fabricated ceiling mounted radiant panels for space heating - Test method for thermal output*

EN 14037-3:2016, *Free hanging heating and cooling surfaces for water with a temperature below 120°C - Part 3: Pre-fabricated ceiling mounted radiant panels for space heating - Rating method and evaluation of radiant thermal output*

EN ISO 2409, *Paints and varnishes - Cross-cut test (ISO 2409)*

3 Terms and definitions

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

3.1
heating appliance
device having the purpose of transferring heat in order to provide specific temperature conditions inside buildings

3.2
independent heating appliance
self-contained heating appliance which does not need to be connected to a remote heat source (e. g. a boiler) as it contains its own heat source (e. g. gas fired appliances, electric appliances, heat pump appliances)

3.3
pre-fabricated ceiling mounted radiant panel
pre-fabricated heat-transmitting device in the form of a heating or cooling element with width of 0,3 m up to 1,5 m fitted with connection components or open pipes for in-side-assembling and designed to operate on water flow heating and/or cooling facilities