



SLOVENSKI STANDARD
kSIST FprEN 14037-1:2015
01-december-2015

**Prosto obešene grelne in hladilne površine za vodo s temperaturo do 120 °C - 1.
del: Predizdelane stropne sevalne plošče za gretje prostora - Tehnične
specifikacije in zahteve**

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

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

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

Ta slovenski standard je istoveten z: FprEN 14037-1

ICS:

91.140.10	Sistemi centralnega ogrevanja	Central heating systems
-----------	----------------------------------	-------------------------

kSIST FprEN 14037-1:2015	en,fr,de
---------------------------------	-----------------

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

FINAL DRAFT
FprEN 14037-1

September 2015

ICS 91.140.10; 91.140.30

Will supersede 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 draft European Standard is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 130.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

CEN members are the national standards bodies of 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 United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

European foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Symbols and units	11
5 Requirements	13
5.1 General manufacturing requirements	13
5.2 Surface protection.....	13
5.3 Materials.....	14
5.4 Surface emissivity	14
5.5 Mechanical resistance	14
5.5.1 Horizontal curvature of radiant ceiling panels	14
5.5.2 Vertical deflection of radiant ceiling panels.....	15
5.6 Resistance to fixings.....	15
5.7 Pressure tightness	15
5.8 Resistance to pressure	15
5.9 Dimensional tolerances.....	15
5.10 Upper Insulation.....	15
5.11 Water flow resistance.....	16
5.12 Release of dangerous substances.....	16
5.13 Reaction to fire.....	16
5.13.1 General.....	16
5.13.2 Free hanging heating and cooling surfaces classified as Class A1 without the need for testing.....	16
5.13.3 Free hanging heating and cooling surfaces classified according to the test results	17
5.14 Rated thermal output and characteristic equation	17
5.15 Surface temperature	17
6 Assessment and verification of constancy of performance - AVCP	17
6.1 General.....	17
6.2 Type testing.....	17
6.2.1 General.....	17
6.2.2 Test samples, testing and compliance criteria	18
6.2.3 Test reports.....	19
6.2.4 Shared other party results.....	19
6.3 Factory production control (FPC)	20
6.3.1 General.....	20
6.3.2 Requirements.....	20
6.3.3 Product specific requirements.....	24
6.3.4 Initial inspection of factory and of FPC	24
6.3.5 Continuous surveillance of FPC.....	25
6.3.6 Procedure for modifications	25
6.3.7 One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity	26
7 Technical documentation.....	27
7.1 General.....	27
7.2 Designation of the ceiling mounted radiant panels.....	27
7.3 Maximum operating pressure	27
7.4 Maximum operating temperature	27

7.5	Thermal output respectively cooling capacity.....	27
7.6	Dimensions and technical data.....	27
7.7	Reference data.....	28
7.8	Installation manual.....	28
Annex ZA (informative) Relationship of this European Standard with Regulation (EU) No.		
	305/2011.....	29
ZA.1	Scope and relevant characteristics.....	29
Bibliography	33

FprEN 14037-1:2015 (E)**European foreword**

This document (FprEN 14037-1:2015) 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 is currently submitted to the Unique Acceptance Procedure.

This document will supersede EN 14037-1:2003.

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.

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.*

FprEN 14037-1:2015 (E)**1 Scope**

This European Standard defines technical specifications and requirements of free hanging prefabricated 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 shall 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*

FprEN 14037-2:2015, *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*

FprEN 14037-3:2015, *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