

**Ventilation for buildings - Chilled beams
- Testing and rating of passive chilled
beams**

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and rating of passive chilled beams

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14518:2005 sisaldab Euroopa standardi EN 14518:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 15.07.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14518:2005 consists of the English text of the European standard EN 14518:2005.</p> <p>This document is endorsed on 15.07.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies test conditions and methods for the determination of the cooling capacity of chilled beams or other similar systems with free convection, i.e. without forced air flow. Also included is the method to determine local air velocity and temperature below the beam.</p>	<p>Scope: This European Standard specifies test conditions and methods for the determination of the cooling capacity of chilled beams or other similar systems with free convection, i.e. without forced air flow. Also included is the method to determine local air velocity and temperature below the beam.</p>
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ICS 91.140.30

Võtmesõnad: ceilings, cooling, definition, dimensioning, measurement

ICS 91.140.30

English version

Ventilation for buildings - Chilled beams - Testing and rating of passive chilled beams

Ventilation des bâtiments - Poutres froides - Essais et évaluation des poutres froides passives

Lüftung von Gebäuden - Kühlbalken - Prüfung und Bewertung von passiven Kühlbalken

This European Standard was approved by CEN on 25 March 2005.

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 Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This European Standard (EN 14518:2005) has been prepared by Technical Committee CEN /TC 156, "Ventilation for buildings", the secretariat of which is held by BSI.

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 December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005. The other standards dealing with chilled beams and chilled ceilings are:

EN 14240 *Ventilation for buildings — Chilled ceilings — Testing and rating*

prEN 15116 *Ventilation in buildings — Chilled beams — Testing and rating of active chilled beams*

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

1 Scope

This European Standard specifies test conditions and methods for the determination of the cooling capacity of chilled beams or other similar systems with free convection, i.e. without forced air flow. Also included is the method to determine local air velocity and temperature below the beam.

The purpose of the standard is to give comparable and repeatable product data.

The test method applies to all types of convector cooling systems using any medium as energy transport medium.

NOTE The result is valid only for the specified test set up. For other conditions, (i.e. different positions of heat loads, inactive ceiling elements around the test objects or forced flow into or around the test object), the producer should give guidance based on full scale tests.

This standard refers to water as the cooling medium throughout, however, wherever water is written, any other cooling medium can also be used in the test. Where air is the transport medium this air may not be discharged into the test room.

2 Normative references

The following referenced documents are indispensable for the application 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 12792:2003, *Ventilation for buildings - Symbols, terminology and graphical symbols*

EN 13182, *Ventilation for buildings — Instrumentation requirements for air velocity measurements in ventilated spaces*

EN 14240:2004, *Ventilation for buildings — Chilled ceilings — Testing and rating*

EN ISO 7726, *Ergonomics of the thermal environment - Instruments for measuring physical quantities (ISO 7726:1998)*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 12792:2003 and the following apply.

3.1.1

chilled beam

convector cooled with water and mounted under the ceiling of the test room with suspended ceiling

NOTE This standard deals with passive beams, i.e. convectors with free convection only.

3.1.2

test room

room in which the test object is mounted