Keskkonna soojuslikud omadused. Mõõtevahendid füüsikaliste suuruste mõõtmiseks

Ergonomics of the thermal environments - Instruments And que services of the servic for measuring physical quantities



EESTI STANDARDI EESSÕNA

See Eesti standard EVS-EN ISO 7726:2003 sisaldab Euroopa standardi EN ISO 7726:2001 ingliskeelset teksti.

Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.

Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.07.2001.

Standard on kättesaadav Eesti Standardikeskusest.

NATIONAL FOREWORD

This Estonian standard EVS-EN ISO 7726:2003 consists of the English text of the European standard EN ISO 7726:2001.

This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.

Date of Availability of the European standard is 18.07.2001.

The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.180

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation: Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 7726

July 2001

ICS 13.180

Supersedes EN 27726:1993

English version

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

Ergonomie des ambiances thermiques - Appareils de mesure des grandeurs physiques (ISO 7726:1998)

Umgebungsklima - Instrumente zur Messung physikalischer Größen (ISO 7726:1998)

This European Standard was approved by CEN on 10 May 2001.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Annex ZA (normative)
Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Year</u>	<u>Title</u>		EN/HD	Year
1994	Determination of the PMV indices and specification	and PPD of the	EN ISO 7730	1995
	OLO LO			
		90		
			9	
				5
		Moderate thermal environment of the PMV indices and specification conditions for thermal comformal comform	Moderate thermal environments - Determination of the PMV and PPD indices and specification of the conditions for thermal comfort	Moderate thermal environments - EN ISO 7730 Determination of the PMV and PPD indices and specification of the conditions for thermal comfort

Contents

			Page			
1	Scope	э	1			
2	Norm	ative reference	1			
3	Gene	ral	. 1			
4	Meas	uring instruments	2			
5	Speci	fications relating to measuring methods	. 5			
Anı	nex A	Measurement of air temperature	12			
Anı	nex B	Measurement of the mean radiant temperature	. 14			
Anı	nex C	Measurement of plane radiant temperature	28			
Anı	nex D	Measurement of the absolute humidity of the air	35			
Anı	nex E	Measurement of air velocity	45			
Anı	nex F	Measurement of surface temperature	. 48			
Anı	nex G	Measurement of operative temperature	49			
Anı	nex H	Bibliography	51			
© I	SO 1998	3				
All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.						
lı C	nternatio	onal Organization for Standardization stale 56 • CH-1211 Genève 20 • Switzerland iso@iso.ch				
Drine		witz orland				

© ISO 1998

Printed in Switzerland

Introduction

This document is one of a series of International Standards intended for use in the study of thermal environments.

This series of International Standards deals in particular with

- the finalization of definitions for the terms to be used in the methods of measurement, testing or interpretation, taking into account standards already in existence or in the process of being drafted;
- the laying down of specifications relating to the methods for measuring the physical quantities which characterize thermal environments;
- the selection of one or more methods for interpreting the parameters;
- the specification of recommended values or limits of exposure for the thermal environments coming within the comfort range and for extreme environments (both hot and cold);
- the specification of methods for measuring the efficiency of devices or processes for personal or collective protection from heat or cold.

Any measuring instrument which achieves the accuracy indicated in this International Standard, or even better improves on, may be used.

The description or listing of certain instruments in the annexes can only signify that they are "recommended", since characteristics of these instruments may vary according to the measuring principle, their construction and the way in which they are used. It is up to users to compare the quality of the instruments available on the market at any given moment and to check that they conform to the specifications contained in this International Standard.

Ergonomics of the thermal environment — Instruments for measuring physical quantities

1 Scope

This International Standard specifies the minimum characteristics of instruments for measuring physical quantities characterizing an environment as well as the methods for measuring the physical quantities of this environment.

It does not aim to define an overall index of comfort or thermal stress but simply to standardize the process of recording information leading to the determination of such indices. Other International Standards give details of the methods making use of the information obtained in accordance with this standard.

This International Standard is used as a reference when establishing

- a) specifications for manufacturers and users of instruments for measuring the physical quantities of the environment;
- b) a written contract between two parties for the measurement of these quantities.

It applies to the influence of hot, moderate, comfortable or cold environments on people.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 7730:1994, Moderate thermal environments — Determination of the PMV and PPD indices and specification of the conditions for thermal comfort.

3 General

3.1 Comfort standard and stress standard

The specifications and methods contained in this International Standard have been divided into two classes according to the extent of the thermal annoyance to be assessed.

The type C specifications and methods relate to measurements carried out in moderate environments approaching comfort conditions (comfort standard).

The type S specifications and methods relate to measurements carried out in environments subject to a greater thermal stress or even environments of extreme thermal stress (heat stress standard).

The specifications and methods described for each of these classes have been determined bearing in mind the practical possibilities of *in situ* measurements and the performances of measuring instruments available at present.