

<b>TNI</b>	<b>Ergonómia Interakcia človek-systém Časť 514: Návod na aplikáciu antropometrických údajov v súbore ISO 9241-500 (ISO/TR 9241-514: 2020)</b>	<b>TNI CEN ISO/TR 9241-514</b>  <b>83 3580</b>
------------	---	--

Ergonomics of human-system interaction - Part 514: Guidance for the application of anthropometric data in the ISO 9241-500 series (ISO/TR 9241-514:2020)

Táto technická normalizačná informácia obsahuje anglickú verziu CEN ISO/TR 9241-514:2022,  
ISO/TR 9241-514:2020.

This Technical standard information includes the English version of CEN ISO/TR 9241-514:2022,  
ISO/TR 9241-514:2020.

Táto technická normalizačná informácia bola oznámená vo Vestníku ÚNMS SR č. 01/23

**136252**

## TECHNICAL REPORT

**CEN ISO/TR 9241-514**

## RAPPORT TECHNIQUE

## TECHNISCHER REPORT

October 2022

ICS 13.180

English Version

**Ergonomics of human-system interaction - Part 514:  
Guidance for the application of anthropometric data in the  
ISO 9241-500 series (ISO/TR 9241-514:2020)**

Ergonomie de l'interaction homme-système - Partie  
514: Recommandations pour l'application des données  
anthropométriques dans la série des ISO 9241-500  
(ISO/TR 9241-514:2020)

This Technical Report was approved by CEN on 23 October 2022. It has been drawn up by the Technical Committee CEN/TC 122.

CEN members are the national standards bodies of 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, Türkiye and United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**CEN ISO/TR 9241-514:2022 (E)****Contents**

	Page
<b>European foreword.....</b>	<b>3</b>

## **European foreword**

The text of ISO/TR 9241-514:2020 has been prepared by Technical Committee ISO/TC 159 "Ergonomics" of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TR 9241-514:2022 by Technical Committee CEN/TC 122 "Ergonomics" the secretariat of which is held by DIN.

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.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

## **Endorsement notice**

The text of ISO/TR 9241-514:2020 has been approved by CEN as CEN ISO/TR 9241-514:2022 without any modification.

# TECHNICAL REPORT

**ISO/TR  
9241-514**

First edition  
2020-08

---

---

## Ergonomics of human-system interaction —

Part 514:  
**Guidance for the application of  
anthropometric data in the ISO 9241-  
500 series**

---

---

---

Reference number  
ISO/TR 9241-514:2020(E)



© ISO 2020

**ISO/TR 9241-514:2020(E)****COPYRIGHT PROTECTED DOCUMENT**

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

## Contents

	Page
<b>Foreword</b>	<b>iv</b>
<b>Introduction</b>	<b>v</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>1</b>
<b>4 Accommodation estimates are statistical inferences based on samples drawn from the intended user population</b>	<b>2</b>
4.1 Population samples	2
4.1.1 Samples	2
4.1.2 Weighting	2
4.2 Univariate accommodation estimates	2
4.3 Multivariate accommodation estimates	3
4.3.1 Virtual fit test (VFT)	3
4.3.2 Principal component analysis (PCA) and boundary cases	4
4.3.3 Dealing with limited data	5
4.3.4 Estimating concurrent accommodation for two or more variables using percentile values	5
4.3.5 Estimating concurrent accommodation for two or more variables using percentile values	6
4.3.6 Z-score multipliers in addition and subtraction of percentile values	6
<b>Bibliography</b>	<b>8</b>

**ISO/TR 9241-514:2020(E)**

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction*.

A list of all parts in the ISO 9241 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## **Introduction**

The use of interactive systems takes place within a physical environment. The design of the physical environment is decisive with regard to the outcome of the interaction between a variety of sizes of users and the physical environment. As described in the system concept of ISO 26800, the physical environment is embedded in an organizational and a social and cultural environment.

This document deals with the physical environment in which a physically diverse user group is assigned to one or more workplaces, or spatial environments, to accomplish a task. The entirety of the spatial environments assigned to a user is called environment of use. The relevant physical attributes of the environment of use include issues such as air quality, thermal conditions, lighting, noise, spatial layout and furniture. Specifically, this document discusses concepts for the spatial layout of workplaces so that they match the physical anthropometric characteristics of the intended user population.



# Ergonomics of human-system interaction —

Part 514:

**Guidance for the application of anthropometric data in the ISO 9241-500 series**

## 1 Scope

This document is intended to provide guidance in the use of anthropometric data within the ISO 9241-500 series.

## 2 Normative references

There are no normative references in this document.

koniec náhľadu – text d'alej pokračuje v platenej verzii STN