SIST

SLOVENSKI STANDARD
SIST EN ISO 20685:2010

01-december-2010

Nadomešča:
SIST EN ISO 20685:2006

Postopki 3D-skeniranja za mednarodno združljive baze antropometrijskih podatkov (ISO 20685:2010)

3-D scanning methodologies for internationally compatible anthropometric databases (ISO 20685:2010)

3-D-Scanverfahren für international kompatible anthropometrische Datenbanken (ISO 20685:2010)

Méthodologies d'exploration tridimensionnelles pour les bases de données anthropométriques compatibles au plan international (ISO 20685:2010)

Ta slovenski standard je istoveten z: EN ISO 20685:2010

ICS:

13.180	Ergonomija	Ergonomics

SIST EN ISO 20685:2010 en,fr,de

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 20685

June 2010

ICS 13.180

Supersedes EN ISO 20685:2005

English Version

3-D scanning methodologies for internationally compatible anthropometric databases (ISO 20685:2010)

Méthodologies d'exploration tridimensionnelles pour les bases de données anthropométriques compatibles au plan international (ISO 20685:2010)

3-D-Scanverfahren für international kompatible anthropometrische Datenbanken (ISO 20685:2010)

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Foreword

This document (EN ISO 20685:2010) has been prepared by Technical Committee ISO/TC 159 "Ergonomics" in collaboration with Technical Committee CEN/TC 122 “Ergonomics” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by December 2010, and conflicting national standards shall be withdrawn at the latest by December 2010.

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Endorsement notice

The text of ISO 20685:2010 has been approved by CEN as a EN ISO 20685:2010 without any modification.

INTERNATIONAL STANDARD

ISO 20685

Second edition
2010-06-15

3-D scanning methodologies for internationally compatible anthropometric databases

Méthodologies d'exploration tridimensionnelles pour les bases de données anthropométriques compatibles au plan international

Reference number
ISO 20685:2010(E)

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Published in Switzerland

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Foreword

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ISO 20685 was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 3, *Anthropometry and biomechanics*.

This second edition cancels and replaces the first edition (ISO 20685:2005), of which it constitutes a minor revision.

Introduction

Anthropometric measures are key to many International Standards. These measures can be gathered using a variety of instruments. An instrument with relatively new application to anthropometry is a three-dimensional (3-D) scanner. 3-D scanners generate a 3-D point cloud of the outside of the human body that can be used for clothing and automotive design, engineering and medical applications. There are currently no standardized methods for using 3-D point clouds in the design process. As a result, many users extract one-dimensional (1-D) data from 3-D point clouds. This International Standard concerns the application of 3-D scanners to the collection of one-dimensional anthropometric data for use in design.

There are a number of different fundamental technologies that underlie commercially available systems. These include stereophotogrammetry, ultrasound and light (laser light, white light and infrared). Further, the software that is available to process data from the scan varies in its methods. Additionally, software to extract dimensions similar to traditional dimensions varies markedly in features and capabilities.

As a result of differences in fundamental technology, hardware and software, extracted measurements from several different systems can be markedly different for the same individual. Since 3-D scanning can be used to gather measurements, such as lengths and circumferences, it was important to develop an International Standard that allows users of such systems to judge whether the 3-D system is adequate for these needs.

The intent of ISO 20685 is to ensure comparability of body measurements as specified by ISO 7250-1 but measured with the aid of 3-D body scanners rather than with traditional anthropometric instruments such as tape measures and callipers. It is further intended that by conformance with this International Standard any data extracted from scans will be suitable for inclusion in international databases such as those described in ISO 15535.