This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN ISO 13385-2:2011

Geometrical product specifications (GPS) - Dimensional measuring equipment - Part 2: Calliper depth gauges; Design and metrological characteristics (ISO 13385 -2:2011)

© NSAI 2011 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN ISO 13385-2:2011

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:

This document is based on:
EN ISO 13385-2:2011

Published:
27 July, 2011

This document was published under the authority of the NSAI and comes into effect on:

27 July, 2011

ICS number:

17.040.30

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W **NSAI.ie**

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 13385-2

July 2011

ICS 17.040.30

English Version

Geometrical product specifications (GPS) - Dimensional measuring equipment - Part 2: Calliper depth gauges; Design and metrological characteristics (ISO 13385-2:2011)

Spécification géométrique des produits (GPS) - Équipement de mesurage dimensionnel - Partie 2: Jauges de profondeur; caractéristiques de conception et caractéristiques métrologiques (ISO 13385-2:2011)

Geometrische Produktspezifikation (GPS) - Längenmessgeräte - Teil 2: Tiefenmessschieber; Konstruktionsmerkmale und messtechnische Anforderungen (ISO 13385-2:2011)

This European Standard was approved by CEN on 28 April 2011.

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 CEN-CENELEC 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 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2011 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

This is a free page sample. Access the full version online.

Contents

Page

Foreword.....3

This is a free page sample. Access the full version online.

Foreword

This document (EN ISO 13385-2:2011) has been prepared by Technical Committee ISO/TC 213 “Dimensional and geometrical product specifications and verification” in collaboration with Technical Committee CEN/TC 290 “Dimensional and geometrical product specifications and verification” the secretariat of which is held by AFNOR.

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 January 2012, and conflicting national standards shall be withdrawn at the latest by January 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 13385-2:2011 has been approved by CEN as a EN ISO 13385-2:2011 without any modification.

This is a free page sample. Access the full version online.

This page is intentionally left BLANK.

This is a free page sample. Access the full version online.

I.S. EN ISO 13385-2:2011

INTERNATIONAL STANDARD

ISO 13385-2

First edition
2011-07-15

Geometrical product specifications (GPS) — Dimensional measuring equipment —

Part 2: Calliper depth gauges; Design and metrological characteristics

Spécification géométrique des produits (GPS) — Équipement de mesurage dimensionnel —

Partie 2: Jauges de profondeur; caractéristiques de conception et caractéristiques métrologiques

Reference number
ISO 13385-2:2011(E)

© ISO 2011

This is a free page sample. Access the full version online.

COPYRIGHT PROTECTED DOCUMENT

© ISO 2011

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 either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a free page sample. Access the full version online.

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 Design characteristics 2
4.1 General design and nomenclature 2
4.2 Dimensions 3
4.3 Types of indicating devices 3
4.4 Measuring faces 6

5 Metrological characteristics 6
5.1 General 6
5.2 Effect of slider locking 6
5.3 Maximum permissible error of indication (limited by MPE) 6
5.4 MPE and MPL for a number of metrological characteristics 7

6 Indication in product documentation and data sheets 7

7 Proof of conformance with specifications 8
7.1 General 8
7.2 Measurement standards for the calibration of metrological characteristics 8

8 Marking 8

Annex A (informative) **Error tests** 9

Annex B (informative) **Advice on application** 11

Annex C (informative) **Data sheet (example)** 12

Annex D (informative) **Calibration of metrological characteristics** 13

Annex E (informative) **Relation to the GPS matrix model** 14

Bibliography 16

© ISO 2011 – All rights reserved

This is a free page sample. Access the full version online.

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 13385-2 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This first edition of ISO 13385-2, together with ISO 13385-1, cancels and replaces ISO 3599:1976 and ISO 6906:1984, which have been technically revised.

ISO 13385 consists of the following parts, under the general title *Geometrical product specifications (GPS) — Dimensional measuring equipment*:

— *Part 1: Callipers; Design and metrological characteristics*

— *Part 2: Calliper depth gauges; Design and metrological characteristics*

© ISO 2011 – All rights reserved

This is a free page sample. Access the full version online.

Introduction

This part of ISO 13385 is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences chain link 5 of the chains of standards on size and distance in the general GPS matrix.

The ISO/GPS Masterplan given in ISO/TR 14638 gives an overview of the ISO/GPS system of which this document is a part. The fundamental rules of ISO/GPS given in ISO 8015 apply to this document and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this document unless otherwise indicated.

For more detailed information on the relation of this part of ISO 13385 to other standards and the GPS matrix model, see Annex E.

© ISO 2011 – All rights reserved

This is a free page sample. Access the full version online.

This is a free page sample. Access the full version online.

Geometrical product specifications (GPS) — Dimensional measuring equipment —

Part 2: Calliper depth gauges; Design and metrological characteristics

1 Scope

This part of ISO 13385 provides the most important design and metrological characteristics of calliper depth gauges:

— with analogue indication: vernier scale or circular scale (dial), and

— with digital indication: digital display.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the cited editions apply. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14253-1, *Geometrical Product Specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 1: Decision rules for proving conformance or non-conformance with specifications*

ISO 14253-2:2011, *Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 2: Guidance for the estimation of uncertainty in GPS measurement, in calibration of measuring equipment and in product verification*

ISO 14978:2006, *Geometrical product specifications (GPS) — General concepts and requirements for GPS measuring equipment*

IEC 60529, *Degrees of protection by enclosures (IP Code)*

ISO/IEC Guide 98-3, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

ISO/IEC Guide 99, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

© ISO 2011 – All rights reserved

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation