

# SVENSK STANDARD

## SS-EN ISO 12780-1:2011

Fastställt/Approved: 2011-04-20  
Publicerad/Published: 2011-06-01  
Utgåva/Edition: 1  
Språk/Language: engelska/English  
ICS: 01.040.17; 17.040.10; 17.040.20; 17.040.01

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### **Geometriska produktspecifikationer (GPS) – Raket – Del 1 : Ordlista och parametrar för raket (ISO 12780-1:2011)**

### **Geometrical product specifications (GPS) – Straightness – Part 1: Vocabulary and parameters of straightness (ISO 12780-1:2011)**

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Europastandarden EN ISO 12780-1:2011 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 12780-1:2011.

Denna standard ersätter SIS-ISO/TS 12780-1:2005, utgåva 1.

The European Standard EN ISO 12780-1:2011 has the status of a Swedish Standard. This document contains the official version of EN ISO 12780-1:2011.

This standard supersedes the Swedish Standard SIS-ISO/TS 12780-1:2005, edition 1.

**Förhållandet till övriga delar under samma huvudtitel - Utdrag ur Förord i ISO 12780-1:2011/  
Relations to other parts under the same general title - Extract from the Foreword of  
ISO 12780-1:2011**

ISO 12780 consists of the following parts, under the general title *Geometrical product specifications (GPS) – Straightness*:

- *Part 1: Vocabulary and parameters of straightness*
- *Part 2: Specification operators*

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EUROPEAN STANDARD

**EN ISO 12780-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2011

ICS 01.040.17; 17.040.20

Supersedes CEN ISO/TS 12780-1:2007

English Version

**Geometrical product specifications (GPS) - Straightness - Part  
1: Vocabulary and parameters of straightness (ISO 12780-  
1:2011)**

Spécification géométrique des produits (GPS) - Rectitude -  
Partie 1: Vocabulaire et paramètres de rectitude (ISO  
12780-1:2011)

Geometrische Produktspezifikation (GPS) - Geradheit - Teil  
1: Begriffe und Kenngrößen der Geradheit (ISO 12780-  
1:2011)

This European Standard was approved by CEN on 17 March 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.

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# 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>3.1 General terms</b> .....	<b>1</b>
<b>3.2 Terms relating to profiles</b> .....	<b>2</b>
<b>3.3 Terms relating to the reference line</b> .....	<b>3</b>
<b>3.4 Terms relating to the filter function</b> .....	<b>4</b>
<b>3.5 Terms relating to parameters</b> .....	<b>5</b>
<b>Annex A (informative) Mathematical definition of straightness tolerances of nominal integral features</b> .....	<b>6</b>
<b>Annex B (informative) Synoptic tables of terms, abbreviated terms and parameters</b> .....	<b>7</b>
<b>Annex C (informative) Relationship to the GPS matrix model</b> .....	<b>9</b>
<b>Bibliography</b> .....	<b>11</b>

## Foreword

This document (EN ISO 12780-1:2011) 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 specification 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 October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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.

This document supersedes CEN ISO/TS 12780-1:2007.

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 12780-1:2011 has been approved by CEN as a EN ISO 12780-1:2011 without any modification.



## Introduction

This part of ISO 12780 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 2 of the chain of standards on form of line independent of datum.

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 of the relationship of this part of ISO 12780 to other standards and the GPS matrix model, see Annex C.

This part of ISO 12780 defines terms and concepts necessary for defining the specification operators according to ISO 17450-2 for straightness of integral features.

Extracting data always involves applying a certain filtering process. An additional filtering of the extracted data might or might not be applied. This additional filter can be a mean line filter (Gaussian, spline, wavelet, etc.) or a non-linear filter (e.g. morphological filter). The type of filtering influences the definition of straightness and the specification operators and, therefore, needs to be stated unambiguously.

This part of ISO 12780 is not intended to disallow any means of measuring straightness.



# Geometrical product specifications (GPS) — Straightness —

## Part 1: Vocabulary and parameters of straightness

### 1 Scope

This part of ISO 12780 defines the terms and concepts related to straightness of individual integral features and covers complete straightness profiles only.

NOTE Straightness of an extracted derived axis of a cylinder is defined in ISO 12180-1 and ISO 12180-2.

### 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.

ISO 11562:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Metrological characterization of phase correct filters*

ISO 12780-2:2011, *Geometrical product specifications (GPS) — Straightness — Part 2: Specification operators*

ISO 14660-1:1999, *Geometrical Product Specifications (GPS) — Geometrical features — Part 1: General terms and definitions*

ISO 14660-2:1999, *Geometrical Product Specifications (GPS) — Geometrical features — Part 2: Extracted median line of a cylinder and a cone, extracted median surface, local size of an extracted feature*

ISO 17450-1:—<sup>1)</sup>, *Geometrical product specifications (GPS) — General concepts — Part 1: Model for geometrical specification and verification*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14660-1, ISO 14660-2 and ISO 17450-1 and the following apply.

#### 3.1 General terms

##### 3.1.1

##### **straightness**

property of a straight line

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1) To be published. (Revision of ISO/TS 17450-1:2005)