



# SLOVENSKI STANDARD

## SIST EN ISO 3274:2000

01-december-2000

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### Geometrical product specifications (GPS) - Surface texture: Profile method - Nominal characteristics of contact (stylus) instruments (ISO 3274:1996)

Geometrical product specifications (GPS) - Surface texture: Profile method - Nominal characteristics of contact (stylus) instruments (ISO 3274:1996)

Geometrische Produktspezifikationen (GPS) - Oberflächenbeschaffenheit: Tastschnittverfahren - Nenneigenschaften von Tastschnittgeräten (ISO 3274:1996)

Spécification géométrique des produits (GPS) - Etat de surface: Méthode du profil - Caractéristiques nominales des appareils à contact (palpeur) (ISO 3274:1996)

<https://standards.iteh.ai/catalog/standards/sist/20df4bab-0b5a-4480-ab7f-bca88f14ce79/sist-en-iso-3274-2000>

Ta slovenski standard je istoveten z: EN ISO 3274:1997

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#### **ICS:**

17.040.30      Merila      Measuring instruments

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 3274

November 1997

ICS 17.040.30

Descriptors: see ISO document

English version

Geometrical product specifications (GPS) - Surface texture:  
Profile method - Nominal characteristics of contact (stylus)  
instruments (ISO 3274:1996)

Spécification géométrique des produits (GPS) - Etat de  
surface: Méthode du profil - Caractéristiques nominales des  
appareils à contact (palpeur) (ISO 3274:1996)

Geometrische Produktspezifikationen (GPS) -  
Oberflächenbeschaffenheit: Tastschnittverfahren -  
Nenneigenschaften von Tastschnittgeräten (ISO  
3274:1996)

This European Standard was approved by CEN on 2 November 1997.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

**Foreword**

The text of the International Standard from Technical Committee ISO/TC 57 "Metrology and properties of surfaces" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 290 "Dimensional and geometrical product specification and verification", 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 May 1998, and conflicting national standards shall be withdrawn at the latest by May 1998.

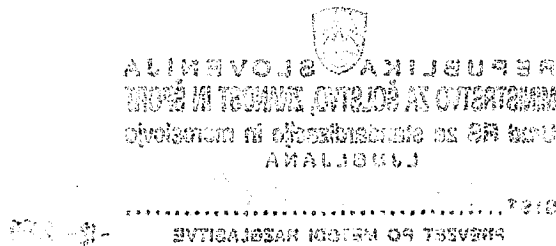
According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

**Endorsement notice**

The text of the International Standard ISO 3274:1996 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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**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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 4288	1996	Geometrical product specifications (GPS) - Surface texture: Profile method - Rules and procedures for the assessment of surface texture	EN ISO 4288	1997

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INTERNATIONAL  
STANDARD

**ISO**  
**3274**

Second edition  
1996-12-01

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**Geometrical Product Specifications  
(GPS) — Surface texture: Profile method —  
Nominal characteristics of contact (stylus)**

iTeh STANDARDS PREVIEW  
instruments  
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<https://standards.iteh.ai/catalog/standards/sist-en-iso-3274-2000>  
Spécification géométrique des produits (GPS) — État de surface: Méthode  
du profil — Caractéristiques nominales des appareils à contact (palpeur)



Reference number  
ISO 3274:1996(E)

## ISO 3274:1996(E)

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## 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.

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.

## iTeh STANDARD PREVIEW

International Standard ISO 3274 was prepared jointly by Technical Committees ISO/TC 57, *Metrology and properties of surfaces*, Subcommittee SC 1, *Geometrical parameters — Instruments and procedures for measurement of surface roughness and waviness*, ISO/TC 3, *Limits and fits*, and ISO/TC 10, *Technical drawings, product definition and related documentation*, Subcommittee SC 5, *Dimensioning and tolerancing*.

This second edition of ISO 3274 cancels and replaces the first edition (ISO 3274:1975) as well as ISO 1880:1979, which have been technically revised.

In particular it takes into account the nominal characteristics of contact (stylus) instruments and their technical development. Modern instruments use phase-correct filters according to ISO 11562.

Annexes A, B, C and D of this International Standard are for information only.

## Introduction

This International Standard 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 chain of standards for roughness profile, waviness profile and primary profile.

For more detailed information of the relation of this standard to other standards and the GPS matrix model, see annex C.

Filters for profile meters according to ISO 3274:1975 were realized as a series connection of two analog RC filters. This led to considerable phase shifts in the transition of the profile and therefore to asymmetrical profile distortions. The influence of this distortion on the parameters  $R_a$  and  $R_z$  are normally negligible if the sampling lengths (cut-off wavelength) according to ISO 4288:1985 are used. Therefore, analog instruments according to ISO 3274:1975 or instruments using 2RC filters may be used for assessment of  $R_a$  and  $R_z$  (see annex A). However, for other parameters the distortion is relevant.

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# Geometrical Product Specifications (GPS) — Surface texture: Profile method — Nominal characteristics of contact (stylus) instruments

## 1 Scope

This International Standard defines profiles and the general structure of contact (stylus) instruments for measuring surface roughness and waviness, enabling existing International Standards to be applied to practical profile evaluation. It specifies the properties of the instrument which influence profile evaluation and it provides the basics of the specification of contact (stylus) instruments (profile meter and profile recorder).

### NOTES

- 1 A data sheet dealing with characteristics of contact (stylus) instruments to be completed by the instrument makers is under preparation and will be introduced in a future standard on calibration procedures.
- 2 The relationships between the waviness cut-off  $\lambda_f$ , tip radius and waviness cut-off ratio are under consideration and will be added to this International Standard as an amendment.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4287:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters.*

ISO 4288:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Rules and procedures for the assessment of surface texture.*

ISO 5436:1985, *Calibration specimens — Stylus instruments — Types, calibration and use of specimens.*

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