

Geometrical product specification (GPS) - Surface texture: Areal - Part 606: Nominal characteristics of non-contact (focus variation) instruments (ISO 25178-606:2015)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 25178-606:2015 sisaldab Euroopa standardi EN ISO 25178-606:2015 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 25178-606:2015 consists of the English text of the European standard EN ISO 25178-606:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

Geometrical product specification (GPS) - Surface texture: Areal
- Part 606: Nominal characteristics of non-contact (focus
variation) instruments (ISO 25178-606:2015)

Spécification géométrique des produits (GPS) - État de
surface: Surfacique - Partie 606: Caractéristiques
nominales des instruments sans contact (à variation focale)
(ISO 25178-606:2015)

Geometrische Produktspezifikation (GPS) -
Oberflächenbeschaffenheit: Flächenhaft - Teil 606:
Merkmale von berührungslos messenden Geräten
(Fokusvariation) (ISO 25178-606:2015)

This European Standard was approved by CEN on 21 February 2015.

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

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European foreword

This document (EN ISO 25178-606:2015) 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of an identical text or by endorsement, at the latest by December 2015, and conflicting national standards shall be withdrawn at the latest by December 2015.

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.

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Endorsement notice

The text of ISO 25178-606:2015 has been approved by CEN as EN ISO 25178-606:2015 without any modification.

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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.

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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

ISO 25178 consists of the following parts, under the general title *Geometrical product specification (GPS) — Surface texture: Areal*:

- *Part 1: Indication des états de surface*
- *Part 2: Terms, definitions and surface texture parameters*
- *Part 3: Specification operators*
- *Part 6: Classification of methods for measuring surface texture*
- *Part 70: Material measures*
- *Part 71: Software measurement standards*
- *Part 72: Format de fichier XML x3p*
- *Part 601: Nominal characteristics of contact (stylus) instruments*
- *Part 602: Nominal characteristics of non-contact (confocal chromatic probe) instruments*
- *Part 603: Nominal characteristics of non-contact (phase-shifting interferometric microscopy) instruments*
- *Part 604: Nominal characteristics of non-contact (coherence scanning interferometry) instruments*
- *Part 605: Nominal characteristics of non-contact (point autofocus probe) instruments*
- *Part 606: Nominal characteristics of non-contact (focus variation) instruments*
- *Part 701: Calibration and measurement standards for contact (stylus) instruments*

The following parts are planned:

- *Part 73: Defects on material measures — Terms and definitions*
- *Part 600: Metrological characteristics for areal-topography measuring methods*
- *Part 607: Nominal characteristics of non-contact (imaging confocal microscopy) instruments*

Introduction

This part of ISO 25178 is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences the chain link 5 of the chain of standards on areal surface texture.

The ISO/GPS Masterplan given in ISO/TR 14638 gives an overview of the ISO/GPS system of which this part of ISO 25178 is a part of. The fundamental rules of ISO/GPS given in ISO 8015 apply to this part of ISO 25178 and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this part of ISO 25178, unless otherwise indicated.

For more detailed information of the relation of this part of ISO 25178 to other standards and the GPS matrix model, see [Annex B](#).

This part of ISO 25178 describes the metrological characteristics of focus variation microscopes designed for the measurement of surface topography maps.

For more detailed information on the focus variation technique, see [Annex A](#).

NOTE Portions of this part of ISO 25178, particularly the informative sections, describe patented systems and methods. This information is provided only to assist users in understanding the operating principles of focus variation. This part of ISO 25178 is not intended to establish priority for any intellectual property, nor does it imply a license to proprietary technologies described herein.

Geometrical product specification (GPS) — Surface texture: Areal —

Part 606: Nominal characteristics of non-contact (focus variation) instruments

1 Scope

This part of ISO 25178 defines the metrological characteristics of a particular non-contact method measuring surface texture using a focus variation (FV) sensor.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3274:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Nominal characteristics of contact (stylus) instruments*

ISO 4287:1997, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 10934-2:2007, *Optics and optical instruments — Vocabulary for microscopy — Part 2: Advanced techniques in light microscopy*

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

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

ISO 25178-2:2012, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 2: Terms, definitions and surface texture parameters*

ISO 25178-3:2012, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 3: Specification operators*

ISO 25178-6:2010, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 6: Classification of methods for measuring surface texture*

ISO 25178-601, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 601: Nominal characteristics of contact (stylus) instruments*

ISO 25178-602, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 602: Nominal characteristics of non-contact (confocal chromatic probe) instruments*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3274, ISO 4287, ISO 10934-2, ISO 17450-1, ISO 14978, ISO 25178-2, ISO 25178-3, ISO 25178-6, ISO 25178-601, ISO 25178-602, and the following apply.