

# SLOVENSKI STANDARD SIST EN ISO 5463:2024

01-december-2024

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**Specifikacija geometrijskih veličin izdelka - Oprema za merjenje oblike; naprave za merjenje oblike z rotacijsko osjo - Zasnova in meroslovne značilnosti (ISO 5463:2024)**

Geometrical product specifications (GPS) - Form measuring equipment; Rotary axis form measuring instruments - Design and metrological characteristics (ISO 5463:2024)

Geometrische Produktspezifikationen (GPS) - Formmessgeräte; Formmessgeräte mit Drehachse - Konstruktion und messtechnische Eigenschaften (ISO 5463:2024)

Spécification géométrique des produits (GPS) - Équipements de mesure de forme ; Instruments de mesure de forme à plateau tournant - Caractéristiques de conception et caractéristiques métrologiques (ISO 5463:2024)

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**ICS:**

17.040.30	Merila	Measuring instruments
17.040.40	Specifikacija geometrijskih veličin izdelka (GPS)	Geometrical Product Specification (GPS)

**SIST EN ISO 5463:2024**

**en,fr,de**



EUROPEAN STANDARD

EN ISO 5463

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2024

ICS 17.040.30; 17.040.40

English Version

## Geometrical product specifications (GPS) - Rotary axis form-measuring instruments - Design and metrological characteristics (ISO 5463:2024)

Spécification géométrique des produits (GPS) -  
Instruments de mesure de forme à axe rotatif -  
Caractéristiques de conception et caractéristiques  
métrologiques (ISO 5463:2024)

Geometrische Produktspezifikationen (GPS) -  
Formmessgeräte mit Drehachse - Konstruktion und  
messtechnische Eigenschaften (ISO 5463:2024)

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## European foreword

This document (EN ISO 5463:2024) 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of an identical text or by endorsement, at the latest by March 2025, and conflicting national standards shall be withdrawn at the latest by March 2025.

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**International  
Standard**

**ISO 5463**

**Geometrical product specifications  
(GPS) — Rotary axis form-  
measuring instruments — Design  
and metrological characteristics**

*Spécification géométrique des produits (GPS) — Instruments de  
mesure de forme à axe rotatif — Caractéristiques de conception  
et caractéristiques métrologiques*

**First edition  
2024-09**

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Published in Switzerland



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## ISO 5463:2024(en)

### 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 document 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](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 290, *Dimensional and geometrical product specification and verification*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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## ISO 5463:2024(en)

### Introduction

This document is a geometrical product specification standard and is to be regarded as a general GPS standard (see ISO 14638). It influences chain link F of the chains of standards on form, orientation, location and run-out.

The ISO GPS matrix model given in ISO 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 relation of this document to other standards and the GPS matrix model, see [Annex F](#).

See ISO/TR 14253-6 for additional information on the selection of alternative decision rules.

There are different types and variants of rotary axis form-measuring instrument. The metrological characteristics described in this document apply to all types and variants.

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# Geometrical product specifications (GPS) — Rotary axis form-measuring instruments — Design and metrological characteristics

## 1 Scope

This document specifies the most important design and metrological characteristics of rotary axis form-measuring instruments.

It is not applicable to coordinate measurement systems as defined by the ISO 10360 series, whether the systems are fitted with a rotary axis or not, except by special agreement.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1101, *Geometrical product specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 14253-5, *Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 5: Uncertainty in verification testing of indicating measuring instruments*

ISO/TR 14253-6, *Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 6: Generalized decision rules for the acceptance and rejection of instruments and workpieces*

ISO 14978:2018, *Geometrical product specifications (GPS) — General concepts and requirements for GPS measuring equipment*

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

ISO/IEC Guide 99:2007, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1101, ISO 14978 and ISO/IEC Guide 99 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## ISO 5463:2024(en)

## 3.1 General terms

## 3.1.1

**rotary axis form-measuring instrument**

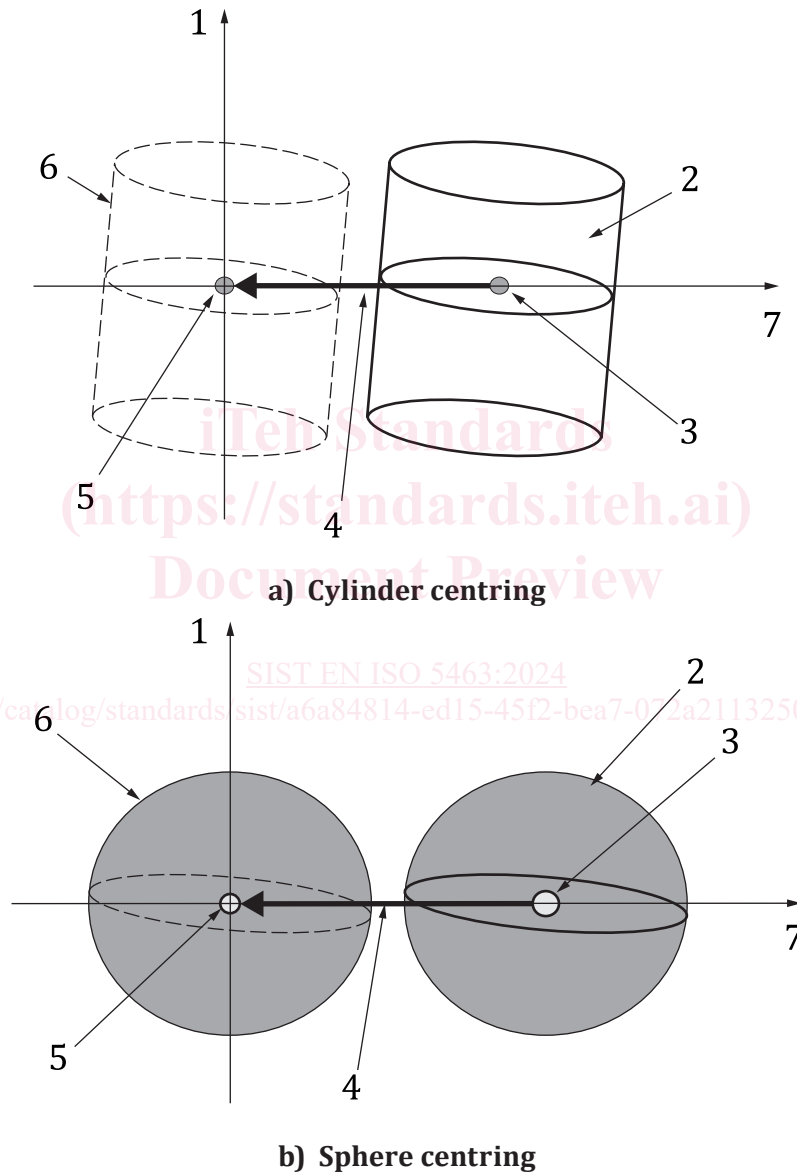
measuring instrument having a rotary axis and quantifying local form deviations from extracted integral surfaces in a cylindrical coordinate system

## 3.1.2

**centring**

adjusting, in a plane perpendicular to the axis of rotation, the position of the centre point of the workpiece to be coincident to the axis of rotation of the instrument

Note 1 to entry: See [Figure 1](#).

**Key**

1	axis of rotation	5	centre point after centring
2	revolute workpiece before centring	6	revolute workpiece after centring
3	centre point before centring	7	orthogonal axis to the axis of rotation
4	centring displacement		

**Figure 1 — Centring**