ICS 17.040.10 SLOVENSKÁ TECHNICKÁ NORMA Január 2019

STN	**Geometrické špecifikácie výrobkov (GPS) Geometrické tolerovanie Geometrická špecifikácia súborov prvkov a kombinovaná geometrická špecifikácia (ISO 5458: 2018)**	**STN EN ISO 5458** 01 4241

Geometrical product specifications (GPS) - Geometrical tolerancing - Pattern and combined geometrical specification (ISO 5458:2018)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/18

Obsahuje: EN ISO 5458:2018, ISO 5458:2018

Oznámením tejto normy sa ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 5458

June 2018

ICS 17.040.10

Supersedes EN ISO 5458:1998

English Version

Geometrical product specifications (GPS) - Geometrical tolerancing - Pattern and combined geometrical specification (ISO 5458:2018)

Spécification géométrique des produits (GPS) - Tolérancement géométrique - Spécification géométrique de groupes d'éléments et spécification géométrique combinée (ISO 5458:2018)

Geometrische Produktspezifikation (GPS) - Form und Lagetolerierung - Positions- und Mustertolerierung (ISO 5458:2018)

This European Standard was approved by CEN on 25 February 2018.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN ISO 5458:2018) 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of an identical text or by endorsement, at the latest by December 2018, and conflicting national standards shall be withdrawn at the latest by December 2018.

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

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Endorsement notice

The text of ISO 5458:2018 has been approved by CEN as EN ISO 5458:2018 without any modification.

INTERNATIONAL STANDARD

ISO 5458

Third edition
2018-05

Geometrical product specifications (GPS) — Geometrical tolerancing — Pattern and combined geometrical specification

Spécification géométrique des produits (GPS) — Tolérancement géométrique — Spécification géométrique de groupes d'éléments et spécification géométrique combinée

Reference number
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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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This third edition cancels and replaces the second edition (ISO 5458:1998), which has been technically revised.

The main changes to the previous edition are as follows:

— exception from the independency principle removed according to ISO 8015;

— rules harmonized to align with ISO 1101;

— unstated rules in ISO 5458:1998 removed;

— concept of “pattern” to control all types of geometrical features introduced more generically, rather than applying it only with position symbol.

Introduction

This document is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO 14638). It influences chain links A, B and C for form, orientation and location.

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 the GPS matrix model, see Annex F.

ISO 1101 and other relevant documents, such as those dealing with the least and maximum material requirement (ISO 2692) and the datum system (ISO 5459), should be taken into consideration when using this document.

This document provides rules for the tolerancing of a tolerance zone pattern, i.e. a collection of tolerance zones constrained to each other with or without reference to a datum system which does not lock all degrees of freedom.

For the presentation of lettering (proportions and dimensions), see ISO 3098-2.

All figures in this document for the 2D drawing indications have been drawn in first-angle projection with dimensions and tolerances in millimeters. It should be understood that third-angle projection and other units of measurement could have been used equally well without prejudice to the principles established.

Annexes A and B provide more information on the changes in practice and differences between this document and ISO 1101 on one hand and ISO 5458:1998 on the other hand.

INTERNATIONAL STANDARD **ISO 5458:2018(E)**

Geometrical product specifications (GPS) — Geometrical tolerancing — Pattern and combined geometrical specification

IMPORTANT — The illustrations included in this document are intended to illustrate the text and/or to provide examples of the related technical drawing specification; these illustrations are not fully dimensioned and toleranced, showing only the relevant general principles. In particular, many illustrations do not contain filter specifications. As a consequence, the illustrations are not a representation of a complete workpiece, and are not of a quality that is required for use in industry (in terms of full conformity with the standards prepared by ISO/TC 10 and ISO/TC 213), and as such are not suitable for projection for teaching purposes.

1 Scope

This document establishes complementary rules to ISO 1101 to be applied to pattern specifications and defines rules to combine individual specifications, for geometrical specifications e.g. using the symbols POSITION, SYMMETRY, LINE PROFILE and SURFACE PROFILE, as well as STRAIGHTNESS (in the case where the toleranced features are nominally coaxial) and FLATNESS (in the case where the toleranced features are nominally coplanar) as listed in Annex C.

These rules apply when a set of tolerance zones are grouped together with location or orientation constraints, through the use of the CZ, CZR or SIM modifiers.

This document does not cover the use of the pattern specifications when the least and maximum material requirement is applied (see ISO 2692).

This document does not cover the establishment of common datum (see ISO 5459) based on pattern features.

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 8015, *Geometrical product specifications (GPS) — Fundamentals — Concepts, principles and rules*

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

ISO 17450-2, *Geometrical product specifications (GPS) — General concepts — Part 2: Basic tenets, specifications, operators, uncertainties and ambiguities*

ISO 22432, *Geometrical product specifications (GPS) — Features utilized in specification and verification*

