Toodete geomeetrilised spetsifikatsiooni (GPS). Valatud osade mõõtmete osas kehtivad ja lubatud geomeetrilised hälbed. Osa 3: Üldised mõõtmete osas kehtivad ja lubatud geomeetrilised hälbed ja valamisel kehtivad töötlemisnormid

Geometrical Product Specifications (GPS) - Dimensional and geometrical tolerances for moulded parts - Part 3: General dimensional and geometrical tolerances and machining allowances for castings

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 8062-3:2007 sisaldab Euroopa standardi EN ISO 8062-3:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 27.07.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 8062-3:2007 consists of the English text of the European standard EN ISO 8062-3:2007. This document is endorsed on 27.07.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This part of ISO 8062 specifies general dimensional and geometrical tolerances, as well as machining allowance grades, for castings as delivered to the purchaser in accordance with ISO 8062-2. It is applicable for the tolerancing of dimensions and geometry of castings in all cast metals and their alloys produced by various casting manufacturing processes.	**Scope:** This part of ISO 8062 specifies general dimensional and geometrical tolerances, as well as machining allowance grades, for castings as delivered to the purchaser in accordance with ISO 8062-2. It is applicable for the tolerancing of dimensions and geometry of castings in all cast metals and their alloys produced by various casting manufacturing processes.

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Geometrical Product Specifications (GPS) - Dimensional and geometrical tolerances for moulded parts - Part 3: General dimensional and geometrical tolerances and machining allowances for castings (ISO 8062-3:2007)

Spécification géométrique des produits (GPS) - Tolérances dimensionnelles et géométriques des pièces moulées - Partie 3: Tolérances dimensionnelles et géométriques générales et surépaisseurs d'usinage pour les pièces moulées (ISO 8062-3:2007)

Geometrische Produktspezifikation (GPS) - Maß-, Form- und Lagetoleranzen für Formteile - Teil 3: Allgemeine Maß-, Form- und Lagetoleranzen und Bearbeitungszugaben für Gussstücke (ISO 8062-3:2007)

This European Standard was approved by CEN on 25 February 2007.

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Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN ISO 8062-3:2007: E

Foreword

This document (EN ISO 8062-3:2007) has been prepared by Technical Committee ISO/TC 213 "Dimensional and geometrical product specifications and verification" in collaboration with Technical Committee CEN/TC 190 "Foundry technology", 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 December 2007, and conflicting national standards shall be withdrawn at the latest by December 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, 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 United Kingdom.

Endorsement notice

The text of ISO 8062-3:2007 has been approved by CEN as EN ISO 8062-3:2007 without any modifications.

INTERNATIONAL STANDARD

ISO 8062-3

First edition
2007-06-01

Geometrical product specifications (GPS) — Dimensional and geometrical tolerances for moulded parts —

Part 3: General dimensional and geometrical tolerances and machining allowances for castings

Spécification géométrique des produits (GPS) — Tolérances dimensionnelles et géométriques des pièces moulées —

Partie 3: Tolérances dimensionnelles et géométriques générales et surépaisseurs d'usinage pour les pièces moulées

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 8062-3 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This first edition of ISO 8062-3, together with ISO 8062-1 and ISO/TS 8062-2, cancels and replaces ISO 8062:1994, of which it constitutes a technical revision.

ISO 8062 consists of the following parts, under the general title *Geometrical product specifications (GPS) — Dimensional and geometrical tolerances for moulded parts*:

— *Part 1: Vocabulary*

— *Part 3: General dimensional and geometrical tolerances and machining allowances for castings*

Rules is to form the subject of a future Part 2 [Technical Specification].

Introduction

This part of ISO 8062 is a geometrical product specification (GPS) standard and is to be regarded as a complementary process-specific tolerance standard (see ISO/TR 14638). It influences chain link 2 of the chain of standards on mouldings.

For more detailed information about the relation of this part of ISO 8062 to other standards and the GPS matrix model, see Annex F.

This part of ISO 8062 defines a system of tolerance grades and machining allowance grades for cast metals and their alloys.

The specified system applies if the manufacturer provides a pattern or die equipment, or accepts responsibility for proving it.

The tolerances specified for a casting may determine the casting method. It is therefore recommended, before the design or the order is finalized, that the customer liaise with the foundry to discuss:

a) the proposed casting design and accuracy required;

b) machining requirements;

c) the method of casting;

d) the location of the parting surfaces and the necessary draft angles;

e) the number of castings to be manufactured;

f) the casting equipment involved;

g) the consequences of the wear-out of the equipment during its life cycle;

h) the datum system in accordance with ISO 5459;

i) the casting alloy;

j) any special requirements, e.g. individual dimensional and geometrical tolerances, fillet radii, tolerances and individual machining allowances;

   NOTE Because the dimensional and geometrical accuracy of a casting is related to production factors, tolerance grades which can be achieved for various methods and metals are described in Annex A.

k) dimensional tolerances for long series and mass production, where development, adjustment and maintenance of casting equipment make it possible to achieve close tolerances;

l) dimensional tolerances for short series and single production;

m) geometrical tolerances.

Information on typical required machining allowance grades is given in Annex B.

Geometrical product specifications (GPS) — Dimensional and geometrical tolerances for moulded parts —

Part 3: General dimensional and geometrical tolerances and machining allowances for castings

1 Scope

This part of ISO 8062 specifies general dimensional and geometrical tolerances, as well as machining allowance grades, for castings as delivered to the purchaser in accordance with ISO 8062-2. It is applicable for the tolerancing of dimensions and geometry, and required machining allowance of castings in all cast metals and their alloys produced by various casting manufacturing processes.

This part of ISO 8062 applies to both general dimensional and general geometrical tolerances (referred to in or near the title block of the drawing), unless otherwise specified, and where specifically referred to on the drawing by one of the references in Clause 9.

The dimensional tolerances covered by this part of ISO 8062 are tolerances for linear dimensions.

The geometrical tolerances covered by this part of ISO 8062 are:

— tolerances for straightness,

— flatness,

— roundness,

— parallelism,

— perpendicularity,

— symmetry, and

— coaxiality.

This part of ISO 8062 can be used for the selection of tolerance values for individual indications.

NOTE This part of ISO 8062 does not apply to 3D CAD models used without indicated dimensions.

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 286-1:1988, *ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits*

ISO 1101:2004, *Geometrical Product Specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 1302:2002, *Geometrical Product Specifications (GPS) — Indication of surface texture in technical product documentation*

ISO 5459:—[1], *Geometrical product specifications (GPS) — Geometrical tolerancing — Datums and datum-systems*

ISO 8062-1:2007, *Geometrical product specifications (GPS) — Dimensional and geometrical tolerances for moulded parts — Part 1: Vocabulary*

ISO/TS 8062-2:—[2], *Geometrical product specifications (GPS) — Dimensional and geometrical tolerances for moulded parts — Part 2: Rules*

ISO 10135:—[3], *Geometrical product specifications (GPS) — Drawing indications for moulded parts in technical product documentation (TPD)*

ISO 10579:1993, *Technical drawings — Dimensioning and tolerancing — Non-rigid parts*

ISO 14405:—[4], *Geometrical product specifications (GPS) — Dimensional tolerancing — Linear sizes*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8062-1, ISO 1101 and ISO 5459 apply.

4 Abbreviated terms

Abbreviated terms are given in Table 1.

Table 1 — Abbreviated terms

Abbreviated term	Interpretation	Reference
DCT	Dimensional casting tolerance	5.2
DCTG	Dimensional casting tolerance grade	5.2
GCT	Geometrical casting tolerance	5.3
GCTG	Geometrical casting tolerance grade	5.3
RMA	Required machining allowance	Clause 8
RMAG	Required machining allowance grade	Clause 8
TP	Taper +	ISO 10135
TM	Taper -	ISO 10135
SMI	Surface mismatch	ISO 10135

1) To be published. Revision of ISO 5459:1981.

2) To be published. Revision of ISO 8062:1994.

3) To be published. Revision of ISO 10135:1994.

4) To be published.