
**Geometrical product specifications
(GPS) — Series of conical tapers and
taper angles**

*Spécification géométrique de produits (GPS) — Série d'angles de
cônes et de conicités*



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Published in Switzerland

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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 1119 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 1119:1998); the tables have been corrected and updated, but not technically modified.

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 links 1 and 2 of the chain of standards on angle.

The ISO/GPS Masterplan given in ISO/TR 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 International Standard to other standards and the GPS matrix model, see Annex A.

Geometrical product specifications (GPS) — Series of conical tapers and taper angles

1 Scope

This International Standard provides calculated values for a series of cones or conical tapers, ranging from 120° to less than 1°, or ratios from 1:0,289 to 1:500, intended for general use in technical engineering.

It applies only to plain conical surfaces, and excludes prismatic pieces, taper threads, bevel gears, etc.

2 Normative references

The following referenced document is 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 3040, *Geometrical product specifications (GPS) — Dimensioning and tolerancing — Cones*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3040 apply.

4 Values

Series 1 and 2 initial values, as specified in Table 1, should be used in the order of preference given with the purpose of reducing the range of tools, gauges and measuring instruments required for production of conical parts.

Table 2 shall be used only for the particular applications indicated in the last column.

For information, these tables give calculated values for the cone angle or the rate of taper, in order to facilitate design, production and control of conical pieces.

Cones shall be dimensioned and toleranced according to ISO 3040.