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**Geometrical product
specifications (GPS)—
Geometrical tolerancing—
Tolerancing of form, orientation,
location and run-out**

ICS 17.040.10

Descriptors : engineering drawings, form tolerances, tolerances of position, technical drawing, mechanical tolerances

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS B 0021 : 1984** is replaced with **JIS B 0021 : 1998**.

This Standard which is entitled *Geometrical product specifications (GPS)—Geometrical tolerancing—Tolerancing of form, orientation, location and run-out* consists of the items given in the Contents.

In the revision of this time this Standard has resulted in an International conformance standard by ensuring the complete conformance with the International Standard **ISO/DIS 1101 : 1996** *Geometrical product specifications (GPS)—Geometrical tolerancing—Tolerancing of form, orientation, location and run-out*.

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In the event of any doubts arising as to the contents,
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**Geometrical product specifications (GPS)—
Geometrical tolerancing—
Tolerancing of form, orientation,
location and run-out**

Introduction This Japanese Industrial Standard has been prepared based on the second edition issued in 1996 of **ISO/DIS 1101** *Geometrical product specifications (GPS)—Geometrical tolerancing—Tolerancing of form, orientation, location and run-out* without changing the technical contents.

The “Informative reference” underlined with a dotted line in this Standard is not included in the original International Standard.

This Standard **JIS B 0021** is a Geometrical Product Specification (GPS) standard and is to be regarded as a General GPS standard (see **ISO/TR 14638**, *Geometrical Product Specifications (GPS)—Masterplan*). It influences the chain link 1 and 2 of the chain of standards **ISO/TR 14638** on form, orientation, location and run out and chain link 1 of the chain of standards on datums.

For more detailed information of the relation of this Standard to the GPS matrix model see Annex D.

This Standard contains all information necessary for the geometrical definition of workpieces. It represents the initial basis and describes the required fundamentals for geometrical tolerancing. Nevertheless, it is advisable to consult the separate standards referenced in 2 and the references described in Table 1 and Table 2 for more detailed information.

For the purposes of this Standard, all numbers and Remarks in all figures have been prepared in upright lettering. It should be understood that these indications could have been written in inclined (italic) lettering without altering the meaning of the indications.

For the presentation of lettering (proportions and dimensions), see **JIS Z 8313-1** *Technical drawings—Lettering—Part 1: Currently used characters*.

Remarks: This standard above is identical to **ISO 3098-1**, *Technical drawings—Lettering—Part 1: Currently used characters*.

In the interest of uniformity, all figures in this Standard have been drawn in third angle projection with dimensions and tolerances in millimetres. It should be understood that first angle projection and other units of measurement could have been used equally well without prejudice to the principles established.

The figures in this Standard illustrate the text and are not intended to reflect an actual application. Consequently, the figures are not fully dimensioned and tolerances showing only the relevant general principles.

For a definitive presentation (proportions and dimensions) of the symbols, symbolization for geometrical tolerancing, see **ISO 7083**.

Annex A (Former practices) of this Standard has been provided for information only. It presents previous drawing indications that have been omitted from this Standard and are no longer used.