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**SANS 286-1:1988**

Edition 1 and nat. amdt 1

**ISO 286-1:1988**

Edition 1

Any reference to SABS ISO 286-1 is deemed  
to be a reference to this standard  
(Government Notice No. 1373 of 8 November 2002)

## **SOUTH AFRICAN NATIONAL STANDARD**

### **ISO system of limits and fits**

### **Part 1: Bases of tolerances, deviations and fits**

This national standard is the identical implementation of ISO 286-1:1988 and is adopted with the permission of the International Organization for Standardization.

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Published by Standards South Africa  
1 dr lategan road groenkloof ☒ private bag x191 pretoria 0001  
tel: 012 428 7911 fax: 012 344 1568 international code + 27 12  
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**Table of changes**

<b>Change No.</b>	<b>Date</b>	<b>Scope</b>
Nat. amdt 1	2007	Amended to change the designation from SABS to SANS, with no technical changes.

**National foreword**

This South African standard was approved by National Committee StanSA TC 5120.61, *Construction standards*, in accordance with procedures of Standards South Africa, in compliance with annex 3 of the WTO/TBT agreement.

This part of SANS 286 was published in March 2007. This SANS edition is technically identical to the first SABS edition (SABS ISO 286-1:1988). National amendment 1 has been added.

SANS 286-1:1988

# INTERNATIONAL STANDARD

ISO  
286-1

First edition  
1988-09-15



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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION  
ORGANISATION INTERNATIONALE DE NORMALISATION  
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

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## ISO system of limits and fits —

### Part 1: Bases of tolerances, deviations and fits

*Système ISO de tolérances et d'ajustements —*

*Partie 1: Base des tolérances, écarts et ajustements*

**SANS 286-1:1988**

## 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

This part of ISO 286 has been prepared by ISO/TC 3, *Limits and fits*, and, together with ISO 286-2, completes the revision of ISO/R 286, *ISO system of limits and fits*. ISO/R 286 was first published in 1962 and subsequently confirmed in November 1964; it was based on ISA Bulletin 25 first published in 1940.

The major changes incorporated in this part of ISO 286 are as follows:

- a) The presentation of the information has been modified so that ISO 286 can be used directly in both the design office and the workshop. This has been achieved by separating the material dealing with the bases of the system, and the calculated values of standard tolerances and fundamental deviations, from the tables giving specific limits of the most commonly used tolerances and deviations.
- b) The new symbols  $j_s$  and  $J_S$  replace the former symbols  $j_s$  and  $J_S$  (i.e.  $s$  and  $S$  are no longer placed as subscripts) to facilitate the use of the symbols on equipment with limited character sets, e.g. computer graphics. The letters "s" and "S" stand for "symmetrical deviation".
- c) Standard tolerances and fundamental deviations have been included for basic sizes from 500 to 3 150 mm as standard requirements (these were previously included on an experimental basis only).
- d) Two additional standard tolerance grades, IT17 and IT18, have been included.
- e) Standard tolerance grades IT01 and IT0 have been deleted from the main body of this part of ISO 286, although information on these grades is given in annex A for users who may have a requirement for such grades.
- f) Inch values have been deleted.
- g) The principles, terminology and symbols have been aligned with those required by contemporary technology.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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