

ISO STANDARDS HANDBOOK

FASTENER AND SCREW THREADS

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Fasteners and screw threads

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International Organization for Standardization

1, rue de Varembé
Case postale 56
CH-1211 Genève 20

Telephone + 41 22 749 01 11
Telefax + 41 22 733 34 30
E-mail central@iso.org
Web www.iso.org/

INTRODUCTION

ISO Technical Committee ISO/TC 2, *Fasteners*, is in a position to dispose of an almost complete system of ISO standards on fasteners which, however, uses also ISO standards on threads prepared by ISO Technical Committee ISO/TC 1, *Screw threads*. This system comprises standards for the most commonly used fasteners for general application including the necessary standards for tolerances, mechanical and functional properties and testing. It also comprises standards on terminology, designation, marking and acceptance and other necessary basic standards.

Nevertheless the work of ISO/TC 2 has not yet been finished and will probably never be finished, as standardization is a process which is in permanent development. Standards which are good for today may be outdated tomorrow due to advances in technology. In fact, in many cases, the second or even the third edition of many ISO standards have now been published.

In the future, ISO/TC 2 will concentrate on the revision of existing ISO standards and the elaboration of new standards in view of the following goals:

- to specify further fastener characteristics;
- to specify further driving features for bolts and screws;
- to revise characteristics with regard to progress in technology or to additional requirements of users;
- to deal with further aspects of quality assurance.

Moreover, there are products, such as those which had a low priority in the past, that are yet to be standardized.

This Handbook gathers together 186 International Standards for fasteners and screw threads mostly prepared by ISO/TC 2, *Fasteners* (169 standards) and ISO/TC 1, *Screw threads* (11 standards). Other standards in this collection were prepared by ISO/TC 10, *Technical drawings, product definition and related documentation* (4 standards) and ISO/TC 44, *Welding and allied processes* (1 standard).

Fasteners and screw threads for aerospace construction are not included in the Handbook. The relevant standards can be provided separately.

The contents in this Handbook are divided into the following three parts:

- Part 1: *Terminology and nomenclature*
- Part 2: *General reference standards*
- Part 3: *Product standards*

This Handbook is a useful tool for designers, engineers, technologists and for all those dealing with fasteners and screw threads in different branches of industry.

EXPLANATORY NOTES

- This ISO Standards Collection Handbook contains the full text and illustrations of currently available ISO standards in the field concerned, together with as many standards covering related subjects as are necessary to provide the user with a complete practical reference.
- Standardization is a dynamic and continuous process and users should take into account the fact that published standards are subject to review and possible revision. The only valid standard is the latest edition available; a convenient way to ensure that one is fully up to date with any given area or with the status of referenced standards is to subscribe to the ISO standing order system or to consult the annual ISO Catalogue. The paper version of the ISO Catalogue is updated quarterly by cumulative supplements whereas the electronic version on ISO Online, at <http://www.iso.org/>, is constantly updated. For assistance, please contact the ISO member body in your country or the ISO Central Secretariat.
- Certain standards described in footnotes as being in preparation have since been published.
- In certain circumstances, ISO also publishes Technical Reports (denoted by the prefix ISO/TR). These are intended to provide either interim progress reports ("state-of-the-art" reports on work on a given subject) or factual information/data of a kind different from that normally incorporated in an International Standard.

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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 1891 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 7, *Reference standards for fasteners (mainly covering terminology, dimensioning, sizes and tolerancing)*.

This second edition cancels and replaces the first edition (ISO 1891:1979), which has been technically revised.

ISO 1891:2009(E/F/R)

Avant-propos

L'ISO (Organisation internationale de normalisation) est une fédération mondiale d'organismes nationaux de normalisation (comités membres de l'ISO). L'élaboration des Normes internationales est en général confiée aux comités techniques de l'ISO. Chaque comité membre intéressé par une étude a le droit de faire partie du comité technique créé à cet effet. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'ISO participent également aux travaux. L'ISO collabore étroitement avec la Commission électrotechnique internationale (CEI) en ce qui concerne la normalisation électrotechnique.

Les Normes internationales sont rédigées conformément aux règles données dans les Directives ISO/CEI, Partie 2.

La tâche principale des comités techniques est d'élaborer les Normes internationales. Les projets de Normes internationales adoptés par les comités techniques sont soumis aux comités membres pour vote. Leur publication comme Normes internationales requiert l'approbation de 75 % au moins des comités membres votants.

L'attention est appelée sur le fait que certains des éléments du présent document peuvent faire l'objet de droits de propriété intellectuelle ou de droits analogues. L'ISO ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de propriété et averti de leur existence.

L'ISO 1891 a été élaborée par le comité technique ISO/TC 2, *Éléments de fixation*, sous-comité SC 7, *Normes de référence pour éléments de fixation (essentiellement la terminologie, les dimensions générales et le tolérancement)*.

Cette deuxième édition annule et remplace la première édition (ISO 1891:1979), qui fait l'objet d'une révision technique.

Предисловие

ИСО (Международная организация по стандартизации) представляет собой всемирное объединение национальных организаций по стандартизации (комитеты-члены ИСО). Разработка Международных стандартов обычно осуществляется техническими комитетами ИСО. Каждый комитет-член может принимать участие в работе любого технического комитета по интересующему его вопросу. Правительственные и неправительственные международные организации, сотрудничающие с ИСО, также принимают участие в этой работе. ИСО тесно сотрудничает с Международной электротехнической комиссией (МЭК) по всем вопросам стандартизации в электротехнике.

Международные стандарты составляются по правилам, установленным в Директивах ИСО/МЭК, часть 2.

Основной задачей технических комитетов является разработка Международных стандартов. Проекты Международных стандартов, принятые техническими комитетами, направляются на голосование комитетам-членам. Опубликование в качестве Международного стандарта требует одобрения не менее 75 % голосовавших комитетов-членов.

Обращается внимание на то, что некоторые элементы настоящего документа могут быть предметами патентных прав. ИСО не может считаться ответственной за необнаружение любых или всех существующих патентных прав.

ИСО 1891 был подготовлен техническим комитетом ИСО/ТК 2, *Крепёжные изделия*, подкомитетом ПК 7, *Ссылочные стандарты для крепежных изделий (основная терминология, чертежи, размеры и допуски)*.

Настоящее второе издание отменяет и заменяет первую первое издание (ИСО 1891:1979) и является его техническим пересмотром.

Fasteners — Terminology

Éléments de fixation — Terminologie

Изделия крепежные — Терминология

1 Scope

This International Standard provides translation guidance for terms commonly used to describe fasteners. This International Standard lays down the terminology of fasteners in English, French and Russian, recommended for use unless otherwise specified in the appropriate product standard.

At present, not all of the fasteners listed are covered by ISO documents. For the main part, the items have been selected from existing national standards. Also included are obsolescent types (those being used up from stock) in order that their terminology may be standardized at the same time.

The drawings are essentially diagrammatic, in particular those showing bolts and screws having special characteristics.

NOTE In addition to terms used in the three official ISO languages (English, French and Russian), this International Standard gives the equivalent terms in Chinese, German, Italian, Japanese, Spanish, and Swedish; these are published under the responsibility of the member bodies for China (SAC), Germany (DIN), Italy (UNI), Japan (JISC), Spain (AENOR), and Sweden (SIS), respectively, and are given for information only. Only the terms given in the official languages can be considered as ISO terms.

1 Domaine d'application

La présente Norme Internationale donne des lignes directrices pour la traduction des termes communément utilisés pour décrire les éléments de fixation. Elle spécifie la terminologie des éléments de fixation, en anglais, français et russe, recommandée pour l'utilisation, sauf en cas de spécification contraire dans la norme de produit appropriée.

Les pièces représentées ne font pas toutes l'objet, pour l'instant, de normes ISO. Elles ont pour l'essentiel été sélectionnées dans les normes nationales existantes. Sont également incluses des pièces qui ne sont plus d'usage courant (les stocks étant en voie d'épuisement), cela afin d'en normaliser également la terminologie.

La représentation des pièces est purement schématique, particulièrement pour les vis à caractéristiques spéciales.

NOTE En complément des termes utilisés dans les trois langues officielles de l'ISO (anglais, français et russe), la présente Norme internationale donne les termes équivalents en chinois, allemand, italien, japonais, espagnol et suédois; ces termes sont publiés sous la responsabilité des comités membres de la Chine (SAC), de l'Allemagne (DIN), de l'Italie (UNI), du Japon (JISC), de l'Espagne (AENOR) et de la Suède (SIS), et sont donnés uniquement pour infor-

1 Область применения

Настоящий Международный стандарт приводит терминологию крепежных изделий на английском, французском и русском языках, рекомендованную для использования, если не указано иное в соответствующем стандарте на продукцию.

В настоящее время не для всех перечисленных в стандарте крепежных изделий имеются документы ИСО. Для основной части образцы взяты из существующих национальных стандартов. Включены также устаревшие типы (те, которые имеются на складах), чтобы их терминология также была стандартизована.

Чертежи деталей выполнены чисто схематически, в особенности те, на которых изображены болты и винты со специальными характеристиками.

ПРИМЕЧАНИЕ В дополнение к терминам на трех официальных языках ИСО (английском, французском и русском) настоящий документ дает эквивалентные термины на китайском, немецком, итальянском, японском, испанском и шведском языках; эти термины опубликованы под ответственность комитетов-членов Китая (SAC), Германии (DIN), Италии (UNI), Японии (JISC), Испании (AENOR), и Швеции (SIS). Однако только

ISO 1891:2009(E/F/R)

Successive order of languages:

en: English
 fr: French
 ru: Russian
 zh: Chinese
 de: German
 it: Italian
 ja: Japanese
 es: Spanish
 sv: Swedish

mation. Seuls les termes dans les langues officielles peuvent être considérés comme étant des termes de l'ISO.

Ordre successif des langues:

en: anglais
 fr: français
 ru: russe
 zh: chinois
 de: allemand
 it: italien
 ja: japonais
 es: espagnol
 sv: suédois

термины и определения на официальных языках можно рассматривать как термины и определения ИСО.

Упорядоченный список языков:

en: английский
 fr: французский
 ru: русский
 zn: китайский
 de: немецкий
 it: итальянский
 ja: японский
 es: испанский
 sv: шведский