

Manipulating industrial robots — Performance criteria and related test methods

The European Standard EN ISO 9283:1998, with the incorporation of its amendment 1:1998, has the status of a British Standard

ICS 25.040.30

National foreword

This British Standard is the English language version of EN ISO 9283:1998. It is identical with ISO 9283:1998. It supersedes BS 7228-4.1:1991 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AMT/-1, AMT Executive Committee, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, the EN ISO foreword page, the ISO title page, pages ii to v, a blank page, pages 1 to 61 and a back cover.

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This British Standard, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Committee and comes into effect on 15 August 1998

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English version

Manipulating industrial robots — Performance criteria and related test methods (ISO 9283:1998)

(includes amendment A1:1998)

Robots manipulateurs industriels — Critères de performance et méthodes d'essai correspondantes
(ISO 9283:1998)
(inclut l'amendement A1:1998)

This European Standard was approved by CEN on 27 February 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

The text of the International Standard ISO 9283:1998 has been prepared by Technical Committee ISO/TC 184 "Industrial automation systems and integration" in collaboration with Technical Committee CEN/TC 310 "Advanced Manufacturing Technologies", the secretariat of which is held by BSI.

This European Standard supersedes EN 29283:1992.

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 October 1998, and conflicting national standards shall be withdrawn at the latest by October 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 9283:1998 was approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

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Manipulating industrial robots — Performance criteria and related test methods

*Robots manipulateurs industriels — Critères de performance et méthodes
d'essai correspondantes*



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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.

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. In accordance with ISO/IEC Directives they are approved if two-thirds of the votes cast by the P-members of the technical committee or sub-committee are in favour, and not more than one-quarter of the total number of votes cast are negative.

International Standard ISO 9283 was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration*, Subcommittee SC 2, *Robots for manufacturing environment*.

This second edition cancels and replaces the first edition (ISO 9283:1990 and Amendment 1:1991), of which it constitutes a technical revision.

Annex A forms an integral part of this International Standard. Annexes B and C are for information only.

Introduction

ISO 9283 is part of a series of International Standards dealing with manipulating industrial robots. Other International Standards cover such topics as safety, general characteristics, coordinate systems, terminology, and mechanical interfaces. It is noted that these International Standards are interrelated and also related to other International Standards.

ISO 9283 is intended to facilitate understanding between users and manufacturers of robots and robot systems. It defines the important performance characteristics, describes how they shall be specified and recommends how they should be tested. An example of how the test results should be reported is included in Annex C of this International Standard. The characteristics for which test methods are given in this International Standard are those considered to affect robot performance significantly.

It is intended that the user of this International Standard selects which performance characteristics are to be tested, in accordance with his own specific requirements.

The tests described in this International Standard may be applied in whole or in part, depending upon the robot type and requirements.

The core part of ISO 9283 deals with testing of individual characteristics. Specific parameters for comparison testing is dealt with in Annex A (normative) for pose-to-pose characteristics and path characteristics.

Annex B (informative) of this International Standard provides guidance for selection of tests for typical applications.

Annex C (informative) of this International Standard provides a recommended format of the test report including the minimum required information and the summary of the test results.