



SLOVENSKI STANDARD SIST EN ISO 6682:2008

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Earth-moving machinery - Zones of comfort and reach for controls (ISO 6682:1986, including Amd 1:1989)

Erdbaumaschine - Stellteile - Bequemlichkeitsbereiche und Reichweitenbereiche (ISO 6682:1986, einschließlich Amd 1:1989)

Engins de terrassement - Zones de confort et d'accessibilité des commandes (ISO 6682:1986, Amd 1:1989 inclus)

Ta slovenski standard je istoveten z: EN ISO 6682:2008

ICS:

53.100 Stroji za zemeljska dela Earth-moving machinery

SIST EN ISO 6682:2008 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 6682

September 2008

ICS 53.100

Supersedes EN ISO 6682:1995

English Version

Earth-moving machinery - Zones of comfort and reach for controls (ISO 6682:1986, including Amd 1:1989)

Engins de terrassement - Zones de confort et d'accessibilité des commandes (ISO 6682:1986, Amd 1:1989 inclus)

Erdbaumaschine - Stellteile - Bequemlichkeitsbereiche und Reichweitenbereiche (ISO 6682:1986, einschließlich Amd 1:1989)

This European Standard was approved by CEN on 25 August 2008.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

The text of ISO 6682:1986, including Amd 1:1989 has been prepared by Technical Committee ISO/TC 127 "Earth-moving machinery" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 6682:2008 by Technical Committee CEN/TC 151 "Construction equipment and building material machines - Safety" the secretariat of which is held by DIN.

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 March 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 6682:1995.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

For relationship with EC Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document.

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

Endorsement notice

The text of ISO 6682:1986, including Amd 1:1989 has been approved by CEN as a EN ISO 6682:2008 without any modification.

Annex ZA (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive Machinery 98/37/EC, amended by 98/79/EC.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements **1.1.2.d**, **1.2.2** and **3.3.1** of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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Annex ZB (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements **1.1.6**, **1.2.2**, **3.3.1** of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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International Standard



6682

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

Earth-moving machinery — Zones of comfort and reach for controls

Engins de terrassement — Zones de confort et d'accessibilité des commandes

Second edition — 1986-06-15

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UDC 621.878/.879 : 331.101.1

Ref. No. ISO 6682-1986 (E)

Descriptors : earth moving equipment, operating stations, ergonomics, operating requirements, control devices, position (location).

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.

International Standard ISO 6682 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*.

This second edition cancels and replaces the first edition (ISO 6682-1980), of which it constitutes a minor revision.

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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Earth-moving machinery — Zones of comfort and reach for controls

1 Scope

This International Standard defines zones of comfort and reach for controls derived from the overlapping reach capability of large and small operators in the seated position.

2 Field of application

This document is intended as a guide for the design of the operator compartment controls for earth-moving machinery.

3 References

ISO 3411, *Earth-moving machinery — Human physical dimensions of operators and minimum operator space envelope*.

ISO 5353, *Earth-moving machinery — Seat index point (SIP)*.

ISO 6746/1, *Earth-moving machinery — Definitions of dimensions and symbols — Part 1: Base machine*.

4 Definitions

4.1 SIP: Seat Index Point as defined by ISO 5353 (fixed at nominal seat adjustments).

4.2 control displacement: Travel or movement of a control through its operational range.

4.3 control location: Positions of a control, including the corresponding control displacement, defined from the SIP.

4.4 primary controls: Controls that are used frequently or continuously by the operator, such as:

- a) Machine controls: transmission, brakes, steering, engine speed, etc.
- b) Working tool controls: blade controls, bucket controls, ripper controls, etc.

4.5 secondary controls: Controls that are infrequently used by the operator, such as lights, windscreen wipers, starter, heater, air conditioner, etc.

4.6 zones of comfort: Preferred control location zones for primary hand and foot controls. Both large and small operators should be able to reach controls comfortably in these zones.

4.7 zones of reach: Control location zones for secondary hand and foot controls. Both large and small operators should be able to reach controls in these zones from the seated position, but the operator may be required to rotate or lean forward and to each side.

4.8 XYZ coordinate system: Coordinate system used to define the control zone locations:

- a) Origin at the SIP.
- b) X-axis; fore-aft, positive to front of the SIP.
- c) Y-axis; lateral, positive to right of the SIP.
- d) Z-axis; vertical, positive upward from the SIP.

See ISO 6746/1.

4.9 flexion: Movement that changes the angle between body parts.

4.10 adduction: Movement in a plane normal to the plane of flexion and directed towards or past the mid-axis (XZ plane) of the body.

4.11 abduction: Movement in a plane normal to the plane of flexion and directed away from the mid-axis (XZ plane) of the body.

4.12 circumduction: Movement about an axis that circumscribes a cone.