

DIN EN ISO 19296



ICS 13.110; 53.100; 73.100.99

Supersedes
DIN EN 1889-1:2011-10

**Mining –
Mobile machines working underground –
Machine safety (ISO 19296:2018);
English version EN ISO 19296:2018,
English translation of DIN EN ISO 19296:2019-04**

Bergbau –
Mobile Untertagemaschinen –
Maschinensicherheit (ISO 19296:2018);
Englische Fassung EN ISO 19296:2018,
Englische Übersetzung von DIN EN ISO 19296:2019-04

Exploitation minière –
Engins mobiles d'exploitation souterraine –
Sécurité des machines (ISO 19296:2018);
Version anglaise EN ISO 19296:2018,
Traduction anglaise de DIN EN ISO 19296:2019-04

Document comprises 57 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

National foreword

This standard includes safety requirements.

This document (EN ISO 19296:2018) has been prepared by Technical Committee ISO/TC 82 “Mining” in collaboration with Technical Committee CEN/TC 196 “Mining machinery and equipment — Safety”.

The responsible German body involved in its preparation was *DIN-Normenausschuss Maschinenbau* (DIN Standards Committee Mechanical Engineering), Working Committee NA 060-15-02 AA “Machines for underground mines” of Section “Mining equipment”. Representatives of manufacturers and users of mobile machines, and of the employers’ liability insurance associations contributed to this standard.

This standard contains specifications giving detail to the essential requirements set out in Annex I of the “Machinery Directive”, Directive 2006/42/EC, and which apply to machines that are either first placed on the market or commissioned within the EEA. This standard serves to facilitate proof of compliance with the essential requirements of that directive.

Once this standard is cited in the Official Journal of the European Union, it is deemed a “harmonized” standard and thus, a manufacturer applying this standard may assume compliance with the requirements of the Machinery Directive (“presumption of conformity”).

The International Standards referred to in Clause 2 and the Bibliography, and which have been taken over as European Standards, have been published as the corresponding DIN EN ISO Standards with the same number.

Where the International Standards referred to are not also DIN ISO Standards with the same number, there are no national standards available, except for:

ISO 2860:1992	DIN EN ISO 2860:1999-10
ISO 2867:2011	DIN EN ISO 2867:2011-01
ISO 3411:2007	DIN EN ISO 3411:2007-11
ISO 3449:2005	DIN EN ISO 3449:2006-01
ISO 3450:2011	DIN EN ISO 3450:2012-04
ISO 3457:2003	DIN EN ISO 3457:2003-12
ISO 3471:2008	DIN EN ISO 3471:2010-01
ISO 3864-3:2012	DIN ISO 3864-3:2012-11
ISO 4413:2010	DIN EN ISO 4413:2011-04
ISO 4414:2010	DIN EN ISO 4414:2011-04
ISO 4871:1996	DIN EN ISO 4871:1997-03
ISO 5349-1:2001	DIN EN ISO 5349-1:2001-05
ISO 6682:1986	DIN EN ISO 6682:1995-04
ISO 6683:2005	DIN EN ISO 6683:2005-07
ISO 7000	DIN ISO 7000
ISO 7010	DIN EN ISO 7010
ISO 7840	DIN EN ISO 7840
ISO 8030:2014	DIN EN ISO 8030:2014-11
ISO 8084:2003	DIN ISO 8084:2017-05
ISO/TR 11688-1	DIN EN ISO 11688-1
ISO 12100:2010	DIN EN ISO 12100:2011-03

ISO 13732-1	DIN EN ISO 13732-1
ISO 13766-1:2018	DIN EN ISO 13766-1:—*)
ISO 13766-2:2018	DIN EN ISO 13766-2:2018-12
ISO 13849-1:2015	DIN EN ISO 13849-1:2016-06
ISO 15667	DIN EN ISO 15667
ISO/TR 25398	DIN CEN/TS 15730
IEC 60204-1:2016	DIN EN 60204-1(VDE 0113-1):—*)

Amendments

This standard differs from DIN EN 1889-1:2011-10 as follows:

- a) the standard has been thoroughly revised and extended;
- b) requirements for retrieval devices have been included;
- c) detailed electrical requirements have been replaced by a reference to ISO 14990;
- d) requirements for braking and its testing have been replaced by incorporating/modifying ISO 3450;
- e) requirements for vibrations have been included;
- f) requirements for tyres and rims have been included;
- g) requirements for coupling devices designed for easy and secure connection and disconnection have been included;
- h) Annex B (Verification data for safety requirements) has been deleted;
- i) Annex ZA (informative) "Relationship between this European Standard and the essential requirements of Directive 2006/42/EC" has been included.

Previous editions

DIN EN 1889-1: 2003-11, 2011-10

*) In preparation.

National Annex NA (informative)

Bibliography

DIN EN 60204-1 (VDE 0113-1):—*), *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

DIN EN ISO 2860:1999-10, *Earth-moving machinery — Minimum access dimensions (ISO 2860:1992)*

DIN EN ISO 2867:2011-01, *Earth-moving machinery — Access systems (ISO 2867:2011)*

DIN EN ISO 3411:2007-11, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope (ISO 3411:2007)*

DIN EN ISO 3449:2006-01, *Earth-moving machinery — Falling-object protective structures — Laboratory tests and performance requirements (ISO 3449:2005)*

DIN EN ISO 3450:2012-04, *Earth-moving machinery — Wheeled or high-speed rubber-tracked machines — Performance requirements and test procedures for brake systems (ISO 3450:2011)*

DIN EN ISO 3457:2003-12, *Earth-moving machinery — Guards — Definitions and requirements (ISO 3457:2003)*

DIN EN ISO 3471:2010-01, *Earth-moving machinery — Roll-over protective structures — Laboratory tests and performance requirements (ISO 3471:2008)*

DIN EN ISO 4413:2011-04, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413:2010)*

DIN EN ISO 4414:2011-04, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4414:2010)*

DIN EN ISO 4871:1997-03, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

DIN EN ISO 5349-1:2001-05, *Mechanical vibration — Measurement and evaluation of human exposure to hand-transmitted vibration — Part 1: General requirements (ISO 5349-1:2001)*

DIN EN ISO 6682:1995-04, *Earth-moving machinery — Zones of comfort and reach for controls (ISO 6682:1986, including Amendment 1:1989)*

DIN EN ISO 6683:2005-07, *Earth-moving machinery — Seat belts and seat belt anchorages — Performance requirements and tests (ISO 6683:2005)*

DIN EN ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

DIN EN ISO 8030:2014-11, *Rubber and plastics hoses — Method of test for flammability (ISO 8030:2014)*

*) In preparation.

DIN EN ISO 11688-1, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning*

DIN EN ISO 12100:2011-03, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

DIN EN ISO 13732-1, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces*

DIN EN ISO 13766-1:—*), *Earth-moving and building construction machinery — Electromagnetic compatibility (EMC) of machines with internal electrical power supply — Part 1: General EMC requirements under typical electromagnetic environmental conditions (ISO 13766-1:2018)*

DIN EN ISO 13766-2:2018-12, *Earth-moving and building construction machinery — Electromagnetic compatibility (EMC) of machines with internal electrical power supply — Part 2: Additional EMC requirements for functional safety (ISO 13766-2:2018)*

DIN EN ISO 13849-1:2016-06, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2015)*

DIN EN ISO 15667, *Acoustics — Guidelines for noise control by enclosures and cabins*

DIN ISO 3864-3:2012-11, *Graphical symbols — Safety colours and safety signs — Part 3: Design principles for graphical symbols for use in safety signs (ISO 3864-3:2012)*

DIN ISO 7000, *Graphical symbols for use on equipment*

DIN ISO 7840, *Small craft — Fire resistant fuel hoses*

DIN ISO 8084:2017-05, *Machinery for forestry — Operator protective structures — Laboratory tests and performance requirements (ISO 8084:2003 + Amd.1:2015)*

DIN CEN/TS 15730, *Earth-moving machinery — Guidelines for assessment of exposure to whole-body vibration of ride-on machines — Use of harmonized data measured by international institutes, organizations and manufacturers*

*) In preparation.

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