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Hand-held non-electric power tools - Safety requirements - Part 13: Fastener driving tools (ISO 11148-13:2017)

Handgehaltene nichtelektrisch betriebene Maschinen Teil 13: Eintreibgeräte
Sicherheitsanforderungen (ISO 11148-13:2017)
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Machines portatives à moteur non électrique + Exigences de sécurité - Partie 13:
Machines à enfoncer les fixations (ISO 11148-13:2017)
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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English Version

**Hand-held non-electric power tools - Safety requirements -
Part 13: Fastener driving tools (ISO 11148-13:2017)**

Machines portatives à moteur non électrique -
Exigences de sécurité - Partie 13: Machines à enfoncer
les fixations (ISO 11148-13:2017)

Handgehaltene nicht-elektrisch betriebene Maschinen
- Sicherheitsanforderungen - Teil 13: Eintreibgeräte
(ISO 11148-13:2017)

This European Standard was approved by CEN on 26 October 2018.

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EN ISO 11148-13:2018 (E)

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European foreword

This document (EN ISO 11148-13:2018) has been prepared by Technical Committee ISO/TC 118 "Compressors and pneumatic tools, machines and equipment" in collaboration with Technical Committee CEN/TC 255 "Hand-held, non-electric power tools - Safety" the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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

This document supersedes EN 792-13:2000+A1:2008.

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 EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZA, which is an integral part of this document.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.
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Endorsement notice

The text of ISO 11148-13:2017 has been approved by CEN as EN ISO 11148-13:2018 without any modification.

Annex ZA (normative)

Relationship between this European Standard and the essential requirements of EU Directive 2006/42/EC aimed to be covered

This European Standard has been prepared under a Commission's standardization request Machinery "M/396" to provide one voluntary means of conforming to essential requirements of EU Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Union under that EU Directive 2006/42/EC compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that EU Directive 2006/42/EC and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and of Directive 2006/42/EC

Essential Requirements of 2006/42/EC	Clause(s)/sub-clause(s) of this EN iTeh STANDARD PREVIEW	Remarks/Notes
Within the limits of the scope all relevant essential requirements are covered	All normative clauses (standards.iteh.ai) https://standards.iteh.ai/catalog/standards/sist/8a3b7d2c-9961-2015-1280-152 https://standards.iteh.ai/catalog/standards/sist/996122f178e2/sist-en-iso-11148-13-2019	For relation of normative clauses of this standard to significant hazards/relevant essential requirements of 2006/42/EC see informative annex A „List of significant hazards“ of this standard in combination with annex D “Examples of significant hazards, hazardous situations, hazardous events and their relation to the Essential Requirements of the Machinery Directive 2006/42/EC” of CEN Guide 414 (https://boss.cen.eu/ref/CE_N_414.pdf).

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL
STANDARD

ISO
11148-13

First edition
2017-11

**Hand-held non-electric power tools —
Safety requirements —**

**Part 13:
Fastener driving tools**

*Machines portatives à moteur non électrique — Exigences de
sécurité —*

iTeh STANDARD PREVIEW
Partie 13: Machines à enfoncer les fixations
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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html

This document was prepared by Technical Committee ISO/TC 118, *Compressors and pneumatic tools, machines and equipment*, Subcommittee SC 3, *Pneumatic tools and machines*.

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A list of all parts in the ISO 11148 series can be found on the ISO website.

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Introduction

This document is a type C standard as stated in ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the Scope.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of other standards, for machines that have been designed and built according to the provisions of this type C standard.

The ISO 11148 series consists of a number of independent parts for individual types of hand-held non-electric power tools.

Certain parts of ISO 11148 cover hand-held non-electric power tools, driven by internal combustion engines powered by gaseous or liquid fuel. In these parts, the safety aspects relating to internal combustion engines are found in a normative annex.

The parts are type C standards and refer to pertinent International Standards of type A and B where such standards are applicable.

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Hand-held non-electric power tools — Safety requirements —

Part 13: Fastener driving tools

1 Scope

This document specifies safety requirements for hand-held non-electric power tools (hereinafter referred to as “fastener driving tools”) intended for installation of a fastener (see [Annex B](#)), forming a mechanical connection or attachment with the workpiece which are for example wood and wood-based materials, plastic materials, fibre materials (loose or compacted), cementitious materials, metals and combinations of these materials. The fastener driving tools for fasteners can be powered by compressed air or combustible gases (which may be ignited by a battery or accumulator) and the energy is transmitted to an impacted element by an intermediary component that does not leave the device. These tools are intended to be used by one operator and supported by the operator's hand or hands, with or without a suspension, e.g. a balancer.

This document is applicable to fastener driving tools in which energy is applied to a loaded fastener for the purpose of driving this into a workpiece.

This document is not applicable to fastener driving tools in which the energy for driving fasteners is drawn from powder-actuated cartridges, hydraulics or from any type of electrical supply.

This document does not deal with special requirements and modifications of hand-held power tools for the purpose of mounting them in a fixture.

This document deals with all significant hazards, hazardous situations or hazardous events relevant to fastener driving tools for fasteners when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer, with the exception of the use of power tools in potentially explosive atmospheres.

NOTE ISO 80079-36 gives requirements for non-electrical equipment for potentially explosive atmospheres.

2 Normative references

The following documents are referred to in text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3864-2:2016, *Graphical symbols — Safety colours and safety signs — Part 2: Design principles for product safety labels*

ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment*

ISO 7010:2011, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 8662-11:1999, *Hand-held portable power tools — Measurement of vibrations at the handle — Part 11: Fastener driving tools*

ISO 8662-11:1999/Amd 1:2001, *Hand-held portable power tools — Measurement of vibrations at the handle — Part 11: Fastener driving tools — Amendment 1*

ISO 11148-13:2017(E)

ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 13732-1:2006, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces*

ISO 13732-3:2005, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 3: Cold surfaces*

EN 12096:1997, *Mechanical vibration — Declaration and verification of vibration emission values*

EN 12549:1999+A1:2008, *Acoustics — Noise test code for fastener driving tools — Engineering method*

EN 15895:2011, *Cartridge operated hand-held tools — Safety requirements — Fixing and hard marking tools*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100, ISO 3857-3 and ISO 5391 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 General terms

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3.1.1

hand-held power tool

machine operated by one or two hands and driven by rotary or linear motors powered by compressed air, gaseous or liquid fuel (which may be ignited by a battery or an accumulator) or stored energy (e.g. by a spring) to do mechanical work and so designed that the motor and the mechanism form an assembly that can easily be brought to its place of operation

3.1.1.1

pneumatic tool

tool, where energy to drive the fasteners comes from compressed air

3.1.1.2

gas tool

tool, where energy to drive the fasteners comes from combustion of gases

3.1.2

horizontal-down

tool orientation, where the tool nose is normal to a horizontal work surface and pointed downwards

3.1.3

horizontal-up

tool orientation where the tool nose is normal to a horizontal work surface and pointed upwards

3.1.4

vertical

tool orientation where the tool nose is normal to a vertical work surface

3.1.5

production application

high-volume professional application such as pallets, furniture, manufactured housing, upholstery and sheathing

3.2 Terms and definitions related to fastener driving tools

3.2.1

fastener driving tool

hand-held power tool in which energy is applied in a linear motion to a loaded fastener for the purpose of driving the fastener into defined materials

3.2.1.1

coil nailer

nailer that drives fasteners from a collated coil of nails

Note 1 to entry: The primary purpose of this tool being production applications

3.2.1.2

heavy-duty stapler or bradner

stapler or bradner capable of driving

- fasteners of 18 gauge/1,2 mm nominal diameter or heavier wire, or
- fasteners with 0,8 mm nominal thickness or larger, or
- fasteners with 1,2 mm nominal width or larger

Note 1 to entry: These tools are primarily for production applications.

3.2.1.3

light-duty tool

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tool capable of driving fasteners where the mass of the fastener is less than 0,5 g and the length is ≤26 mm or less than 0,4 g if the length is ≤6 mm or the tool is operated by hitting the tool in a designated area

3.2.1.4

pinner

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tool capable of driving headless fasteners up to 51 mm in length and a maximum gauge of 23 (0,64 mm) diameter

Note 1 to entry: Larger gauge pinners are available.

3.2.1.5

single-blow tool

fastener driving tool that drives the fastener with a single stroke of the driving element

3.2.1.6

multi-blow tool

fastener driving tool that drives the fastener with more than one stroke of the driving element

3.2.1.7

special application tools

tools without a workpiece contact whose fasteners are formed or clamped during application by devices such as integrated anvils or self-contained clinching anvils which prevents free flight of fasteners

3.2.2

fastener

mechanical device used for securing fixings to surfaces, or joining materials together, such as: nails, staples and pins

3.2.3

collating material

material for joining together single fasteners in strips or coils with adhesive, paper or plastic tape, plastic strap or wire