

**Käeshoitavad mitteelektrilised jõuseadised.  
Ohutusnõuded. Osa 6: Monteerimisjõuseadised  
keermega kinnitusedetailidele**

Hand-held non-electric power tools - Safety requirements -  
Part 6: Assembly power tools for threaded fasteners

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 11148-6:2010 sisaldab Euroopa standardi EN ISO 11148-6:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.11.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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English Version

**Hand-held non-electric power tools - Safety requirements - Part  
6: Assembly power tools for threaded fasteners (ISO 11148-  
6:2010)**

Machines portatives à moteur non électrique - Exigences  
de sécurité - Partie 6: Machines d'assemblage pour  
éléments de fixation filetés (ISO 11148-6:2010)

Handgehaltene nicht elektrisch betriebene Maschinen -  
Sicherheitsanforderungen - Teil 6: Maschinen für  
Schraubverbindungen (ISO 11148-6:2010)

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**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

This document (EN ISO 11148-6:2010) 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of an identical text or by endorsement, at the latest by April 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

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 792-6:2000+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.

For relationship with EU Directive, 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, 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 11148-6:2010 has been approved by CEN as a EN ISO 11148-6:2010 without any modification.

## **Annex ZA (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 Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive except ER 1.5.7 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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## 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 defined in the Scope of this part of ISO 11148.

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

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

Certain elements of this part 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 standards of types A and B where such standards are applicable.

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

## Part 6:

## Assembly power tools for threaded fasteners

**IMPORTANT** — The electronic file of this document contains colours that are considered useful for the correct understanding of the document. Users should consider printing this document using a colour printer. ISO 3864-1 provides colorimetric and photometric properties together with, as a guideline, references from colour order systems.

### 1 Scope

This part of ISO 11148 applies to hand-held non-electric power tools (hereafter referred to as “assembly power tools for threaded fasteners”) intended for tightening or installing of threaded fasteners. The assembly power tools for threaded fasteners can be powered by compressed air, hydraulic fluid or internal combustion engines and are intended for use by one operator and supported by the operator's hand or hands, with or without a suspension, e.g. a balancer.

This part of ISO 11148 covers

- air-hydraulic impulse wrenches;
- impact wrenches;
- fastener installation tools;
- nutrunners;
- open-ended spanners (crow-foot with open-ended socket or tube nut wrench);
- ratchet wrenches;
- screwdrivers.

NOTE 1 For examples of assembly power tools for threaded fasteners, see Annex B.

This part of ISO 11148 does not cover special requirements and modifications of assembly power tools for threaded fasteners for the purpose of mounting them in fixtures.

This part of ISO 11148 deals with all significant hazards, hazardous situations or hazardous events when the tools are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer, with the exception of the use of assembly power tools for threaded fasteners in potentially explosive atmospheres.

NOTE 2 EN 13463-1 gives requirements for non-electrical equipment for potentially explosive atmospheres.



## 2 Normative references

The following referenced documents are indispensable for the application 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 3857-3, *Compressors, pneumatic tools and machines — Vocabulary — Part 3: Pneumatic tools and machines*

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

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

ISO 5391, *Pneumatic tools and machines — Vocabulary*

ISO 7000, *Graphical symbols for use on equipment — Index and synopsis*

ISO 9158, *Road vehicles — Nozzle spouts for unleaded gasoline*

ISO 9159, *Road vehicles — Nozzle spouts for leaded gasoline and diesel fuel*

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

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

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

ISO 15744, *Hand-held non-electric power tools — Noise measurement code — Engineering method (grade 2)*

ISO 17066, *Hydraulic tools — Vocabulary*

ISO 20643, *Mechanical vibration — Hand-held and hand-guided machinery — Principles for evaluation of vibration emission*

ISO 28927-2, *Hand-held portable power tools — Test methods for evaluation of vibration emission — Part 2: Wrenches, nutrunners and screwdrivers*

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

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12100, ISO 3857-3, ISO 5391 and ISO 17066 ( for hydraulic tools), and the following apply.

### 3.1 General definitions

#### 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, hydraulic fluid, gaseous or liquid fuel, electricity 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

**NOTE** Hand-held power tools driven by compressed air or gas are called pneumatic tools (or air tools). Hand-held power tools driven by hydraulic liquid are called hydraulic tools.