Mitteelektrilise ajamiga käsitööriistad. Ohutusnõuded. Osa 4: Käsitööriistad mittepöörleva löögiga

Hand-held non-electric power tools - Safety requirements -JO USSIV Part 4: Non-rotary percussive power tools



#### FESTI STANDARDI FESSÕNA

#### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 11148-4:2010 sisaldab Euroopa standardi EN ISO 11148-4:2010 ingliskeelset teksti.

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

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 01.10.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 11148-4:2010 consists of the English text of the European standard EN ISO 11148-4:2010.

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.

Date of Availability of the European standard text 01.10.2010.

The standard is available from Estonian standardisation organisation.

ICS 25.140.10

#### Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega: Aru 10 Tallinn 10317 Eesti; <a href="www.evs.ee">www.evs.ee</a>; Telefon: 605 5050; E-post: <a href="mailto:info@evs.ee">info@evs.ee</a></a>

#### Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation: Aru str 10 Tallinn 10317 Estonia; <a href="www.evs.ee">www.evs.ee</a>; Phone: 605 5050; E-mail: <a href="mailto:info@evs.ee">info@evs.ee</a>

# EUROPEAN STANDARD

### **EN ISO 11148-4**

# NORME EUROPÉENNE EUROPÄISCHE NORM

October 2010

ICS 25.140.10

Supersedes EN 792-4:2000+A1:2008

#### **English Version**

# Hand-held non-electric power tools - Safety requirements - Part 4: Non-rotary percussive power tools (ISO 11148-4:2010)

Machines portatives à moteur non électrique - Exigences de sécurité - Partie 4: Machines portatives non rotatives à percussion (ISO 11148-4:2010)

Handgehaltene nicht elektrisch betriebene Maschinen -Sicherheitsanforderungen - Teil 4: Schlagende, nicht drehende Maschinen (ISO 11148-4:2010)

This European Standard was approved by CEN on 30 September 2010.

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, 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 United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

### **Foreword**

This document (EN ISO 11148-4:2010) 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 792-4:2000+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 11148-4:2010 has been approved by CEN as a EN ISO 11148-4:2010 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 Soloton Soloto within the scope of this standard.

Page

# Contents

_	7.0	
	ord	
Introduction		<b>v</b>
1	Scope	1
2	Normative references	2
3	Terms and definitions	3
3.1	General definitions	
3.2	Definitions related to non-rotary percussive power tools	4
4	Safety requirements and/or protective measures	4
4.1	General	
4.2	Mechanical safety	5
4.3	Thermal safety	5
4.4	Noise	
4.5	Vibration	
4.6	Materials and substances processed, used or exhausted	
4.7	Ergonomics and design of the handle	
4.8	Controls	
5	Verification	8
5.1	General conditions for tests	
5.2	Noise	
5.3	Vibration	
5.4	Unintentional start	
5.5	Power tool construction	
5.6	Structure of verification of safety requirements	
6	Information for use	10
6.1	Marking, signs and written warnings	10
6.2	Instruction handbook	10
6.3	Operating instructions	16
6.4	Data	
6.5	Maintenance instructions	
Annex	A (informative) List of significant hazards	18
Annex	B (informative) Examples of non-rotary percussive power tools covered by this part of ISO 11148	19
Annev	C (normative) Symbols for labels and signs	
		23
Annex	D (normative) Additional safety requirements related to internal combustion engine power	0.4
	tools	
Bibliog	graphy	28

## 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.

o pertin The parts are type C standards and refer to pertinent standards of types A and B where such standards are applicable.

© ISO 2010 – All rights reserved

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

## Part 4:

# Non-rotary percussive power tools

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.

### Scope

This part of ISO 11148 applies to hand-held non-electric power tools (hereafter referred to as "non-rotary percussive power tools") intended for chipping, riveting, breaking of concrete and asphalt, ramming, etc. The non-rotary percussive power tool can be powered by compressed air, hydraulic fluid or internal combustion engines and is intended for use by one operator and supported by the operator's hand or hands, with or without a suspension, e.g. a balancer.

ex ator c This part of ISO 11148 covers breakers; bush hammers; chipping hammers; small chisels; engraving pens; needle scalers; pick hammers; pile drivers; portable pile drivers; punches; rammers; riveting hammers; scaling hammers; stone hammers; spades; tampers.

NOTE 1 For examples of non-rotary percussive power tools, see Annex B.

© ISO 2010 - All rights reserved

This part of ISO 11148 does not cover special requirements and modifications on non-rotary percussive power tools for the purpose of mounting in a fixture.

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 non-rotary percussive power tools 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 28927-6, Hand-held portable power tools — Test methods for evaluation of vibration emission — Part 6: Rammers

ISO 28927-9, Hand-held portable power tools — Test methods for evaluation of vibration emission — Part 9: Scaling hammers and needle scalers

ISO 28927-10, Hand-held portable power tools — Test methods for evaluation of vibration emission — Part 10: Percussive drills, hammers and breakers

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