

**Käeshoitavad mitteelektrilised jõuseadised.  
Ohutusnõuded. Osa 9: Stantspeenestid  
KONSOLIDEERITUD TEKST**

Hand-held non-electric power tools - Safety  
requirements - Part 9: Die grinders CONSOLIDATED  
TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 792-9:2001+A1:2008 sisaldab Euroopa standardi EN 792-9:2001+A1:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 27.10.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 10.09.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 792-9:2001+A1:2008 consists of the English text of the European standard EN 792-9:2001+A1:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 27.10.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 10.09.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** chucks, grinding machines (tools), manual controls, milling, operating instructions, pedestrian-controlled systems, powered, safety, safety engineering, safety requirements, specification (approval), specifications, symbols, testing, tools, warnings, wire brushes

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English Version

## Hand-held non-electric power tools - Safety requirements - Part 9: Die grinders

Machines portatives à moteur non électrique - Prescriptions  
de sécurité - Partie 9: Meuleuses d'outillage

Handgehaltene nicht-elektrisch betriebene Maschinen -  
Sicherheitsanforderungen - Teil 9: Schleifmaschinen für  
Schleifstifte

This European Standard was approved by CEN on 1 December 2000 and includes Amendment 1 approved by CEN on 26 July 2008.

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




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## Foreword

This document (EN 792-1:2000+A1:2008) has been prepared by 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 March 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This European Standard 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).

**A1** For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A1**

This document includes Amendment 1, approved by CEN on 2008-07-26.

This document supersedes EN 792-9:2001.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

The "European Committee of Manufacturers of Compressors, Vacuum Pumps and Pneumatic Tools", PNEUROP, has given substantial contributions to this standard.

The standard has been created in close co-operation with CENELEC/TC 61F with the aim of achieving requirements for mechanical safety in the EN 50144 series, which are similar for hand-held electric and non-electric power tools.

**NOTE** Other technical committees in CEN dealing with hand-held power tools have been asked to follow the safety requirements as in EN 792.

The annexes to this part of the standard are:

Annex A (informative) Examples of power tools covered by this part

Annex B (informative) Labels, signs and tags

Annex C (informative) Examples of abrasive products used with die grinders

**A1** Annexes ZA and ZB **A1** (informative) Relationship of this European Standard with EU Directives.

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 United Kingdom.

## Introduction

This European standard is a type C standard as stated in EN 1070:1998.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this standard.

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.

EN 792 consists of a number of independent parts for individual types of hand-held non-electric power tools.

Other european standards deal with safety rules for hand-held power tools used in e. g. the following fields:

- agriculture and forestry such as chain saws, hedge-trimmers, brush cutters, grass trimmers;
- construction and building such as cutting-off power tools, concrete vibrators;
- food industry, such as fowl secateurs, sheep shears.

Endeavours have been made to achieve co-ordination with the relevant Technical Committees so that the safety requirements are compatible.

This standard is divided in the following parts:

- Part 1: Assembly power tools for non-threaded mechanical fasteners (former part 14)
- Part 2: Cutting-off and crimping power tools (former part 15)
- Part 3: Drills and tappers
- Part 4: Non rotary percussive power tools
- Part 5: Rotary, percussive power drills
- Part 6: Assembly power tools for threaded fasteners
- Part 7: Grinders
- Part 8: Sanders and polishers
- Part 9: Die grinders
- Part 10: Compression power tools
- Part 11: Nibblers and shears
- Part 12: Small circular, small oscillating and reciprocating saws
- Part 13: Fastener driving tools

Certain parts of EN 792 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 European Standards of type A and B where such standards are applicable.

## 1 Scope

EN 792 applies to hand-held non-electric power tools driven by rotary or linear motors, powered by compressed air, hydraulic fluid and intended to be used by one operator and supported by:

- the operator's hand or hands;
- a suspension, e. g. a balancer.

This part of EN 792 applies to hand-held, non-electric power tools fitted with collets and used for grinding and surface finishing and chamfering using mounted points, burrs and files and small wire brushes mounted on shafts. This part lists the significant hazards caused by such power tools and specifies safety requirements valid for different aspects of safety during their foreseeable lifetime.

NOTE Grinders without collets for use with cones and plugs with threaded inserts are covered by EN 792-7.

Power tools covered by this part of the standard:

- angle die grinders;
- reciprocating files;
- rotary files;
- straight die grinders.

Special requirements and modifications on a hand-held power tool for the purpose of mounting it in a fixture are not covered by this part.

NOTE At the date of publication no die grinders driven by internal combustion engines are known.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to, applies (including amendments).

EN 292-1:1991, *Safety of machinery - Basic concepts, general principles for design – Part 1: Basic terminology, methodology*

EN 292-2:1991, *Safety of machinery - Basic concepts, general principles for design – Part 2: Technical principles and specifications*

EN 563, *Safety of machinery - Temperatures of touchable surfaces - Ergonomics data to establish temperature limit values for hot surfaces*

EN 614-1, *Safety of machinery - Ergonomic design principles – Part 1: Terminology and general principles*

EN 1070:1998, *Safety of machinery - Terminology*

EN 1127-1, *Explosive atmospheres – Explosion prevention and protection – Part 1: Basic concepts and methodology*

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

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

EN ISO 8662-13, *Hand-held portable power tools - Measurement of vibration at the handle – Part 13: Die grinders* (ISO 8662-13:1997)

EN ISO 14163, *Acoustics – Guidelines for noise control by silencers* (ISO 14163:1998)

EN ISO 15744:2008, *Hand-held non-electric power tools – Noise measurement code – Engineering method (grade 2)* (ISO 15744:2002)

EN 28662-1, *Hand-held portable power tools - Measurement of vibration at the handle – Part 1: General* (ISO 8662-1:1988)

ISO 3857-3:1989, *Compressors, Pneumatic tools and machines, Vocabulary – Part 3: Pneumatic tools and machines*.

ISO 5391:1988, *Pneumatic tools and machines – Vocabulary*

### 3 Terms and definitions

For the purposes of this part of the standard, the following terms and definitions apply.

#### 3.1 General terms and definitions

##### 3.1.1

##### **hand-held power tool**

machine 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. The hand-held power tool is operated by one or two hands.

NOTE Hand-held power tools driven by compressed air or gas are called pneumatic tools.

Hand-held power tools driven by hydraulic liquid are called hydraulic tools.

##### 3.1.2

##### **rotary power tool**

hand-held power tool, the machine spindle of which rotates

##### 3.1.3

##### **inserted tool**

tool inserted in the hand-held power tool to perform the intended work

##### 3.1.4

##### **service tool**

tool intended for performing maintenance or service on the hand-held power tool

##### 3.1.5

##### **control device**

device to start and stop the hand-held power tool or to change the direction of the rotation or to control the functional characteristics such as speed and power

##### 3.1.6

##### **maximum operating pressure**

maximum pressure that a hand-held power tool may be operated at, as specified by the manufacturer