BS EN ISO 11148-8:2011

BSI Standards Publication

Hand-held non-electric power tools — Safety requirements

Part 8: Sanders and polishers (ISO 11148-8:2011)

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

raising standards worldwide™

Full document details: BS EN ISO 11148-8:2011

National foreword

This British Standard is the UK implementation of EN ISO 11148-8:2011. It supersedes BS EN 792-8:2001 + A1:2008, which will be withdrawn 30 June 2012.

The UK participation in its preparation was entrusted to Technical Committee MCE/8/-/2, Hand-held, non-electric power tools - Safety.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2012

ISBN 978 0 580 63382 9

ICS 25.140.10; 25.140.99

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2012.

Amendments issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS EN ISO 11148-8:2011

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 11148-8

December 2011

ICS 25.140.10

Supersedes EN 792-8:2001+A1:2008

English Version

Hand-held non-electric power tools - Safety requirements - Part 8: Sanders and polishers (ISO 11148-8:2011)

Machines portatives à moteur non électrique - Exigences de sécurité - Partie 8: Polisseuses-lustreuses et ponceuses (ISO 11148-8:2011)

Handgehaltene nicht elektrisch betriebene Maschinen - Sicherheitsanforderungen - Teil 8: Schleifmaschinen für Schleifblätter und Polierer (ISO 11148-8:2011)

This European Standard was approved by CEN on 12 November 2011.

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-CENELEC 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-CENELEC 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

© 2011 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 11148-8:2011: E

Documents
Document Sharing Hub

Full document details: BS EN ISO 11148-8:2011

Foreword

This document (EN ISO 11148-8:2011) 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 June 2012, and conflicting national standards shall be withdrawn at the latest by June 2012.

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 792-8:2001+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 11148-8:2011 has been approved by CEN as a EN ISO 11148-8:2011 without any modification.

AVA Documents
Document Sharing Hub

Full document details: BS EN ISO 11148-8:2011

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.

Documents
Document Sharing Hub

Full document details: BS EN ISO 11148-8:2011

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 2

3 Terms and definitions 2
3.1 General terms and definitions 2
3.2 Terms and definitions related to sanders and polishers 4

4 Safety requirements and/or protective measures 4
4.1 General 4
4.2 Mechanical safety 5
4.3 Thermal safety 6
4.4 Noise reduction 6
4.5 Vibration 7
4.6 Materials and substances processed, used or exhausted 7
4.7 Ergonomics 7
4.8 Controls 8

5 Verification 9
5.1 General conditions for tests 9
5.2 Noise 9
5.3 Vibration 9
5.4 Unintentional start 9
5.5 Power tool construction 9
5.6 Structure of verification 9

6 Information for use 10
6.1 Marking, signs and written warnings 10
6.2 Instruction handbook 11
6.3 Operating instructions 16
6.4 Data 16
6.5 Maintenance instructions 17

Annex A (informative) **List of significant hazards** 18

Annex B (informative) **Examples of sanders and polishers covered by this part of ISO 11148** 20

Annex C (normative) **Symbols for labels and signs** 21

Annex D (informative) **Examples of abrasive products for use with polishers and sanders** 22

Bibliography 23

© ISO 2011 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 11148-8:2011

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 11148-8 was prepared by Technical Committee ISO/TC 118, *Compressors and pneumatic tools, machines and equipment*, Subcommittee SC 3, *Pneumatic tools and machines*.

ISO 11148 consists of the following parts, under the general title *Hand-held non-electric power tools — Safety requirements*:

— *Part 1: Assembly power tools for non-threaded mechanical fasteners*

— *Part 2: Cutting-off and crimping power tools*

— *Part 3: Drills and tappers*

— *Part 4: Non-rotary percussive power tools*

— *Part 5: Rotary percussive 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: Circular, oscillating and reciprocating saws*

A part 13, dealing with fastener driving tools, is under preparation.

© ISO 2011 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS EN ISO 11148-8:2011

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 requirements of this type-C standard are different from those which 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 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 standards of type A and B where such standards are applicable.

© ISO 2011 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 11148-8:2011

Documents
Document Sharing Hub

INTERNATIONAL STANDARD ISO 11148-8:2011(E)

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

Part 8:
Sanders and polishers

IMPORTANT — The colours represented in the electronic file of this document can be neither viewed on screen nor printed as true representations. For the purposes of colour matching, see ISO 3864-4, which provides colorimetric and photometric properties together with, as a guideline, references from colour order systems.

1 Scope

This part of ISO 11148 specifies safety requirements for hand-held non-electric power tools (hereinafter “sanders and polishers”) intended for polishing and sanding with all types of movement, e.g. rotary, orbital and reciprocating, using coated abrasive products, bonnets of various soft materials and endless belts. The sanders and polishers can be powered by compressed air, hydraulic fluid or internal combustion engines and 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.

NOTE 1 At the time of publication, no sanders and polishers driven by internal combustion engines are known. Once these are identified, it is intended to amend this part of ISO 11148 to include such power tools.

This part of ISO 11148 is applicable to:

— belt sanders;

— orbital sanders;

— polishers;

— random orbital sanders;

— rotary sanders;

— straight-line sanders.

NOTE 2 For examples of sanders and polishers, see Annex B.

This part of ISO 11148 is not applicable to special requirements and modifications of sanders and polishers for the purpose of mounting them in a fixture.

This part of ISO 11148 deals with all significant hazards, hazardous situations or hazardous events relevant to sanders and polishers 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 sanders and polishers in potentially explosive atmospheres.

NOTE 3 EN 13463-1 gives requirements for non-electrical equipment for potentially explosive atmospheres.

© ISO 2011 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 11148-8:2011

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 5391, *Pneumatic tools and machines — Vocabulary*

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 28927-3, *Hand-held portable power tools — Test methods for evaluation of vibration emission — Part 3: Polishers and rotary, orbital and random orbital sanders*

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*

3 Terms and definitions

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

3.1 General terms and 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.

3.1.2
inserted tool
tool inserted in the sander or polisher to perform the intended work

3.1.3
service tool
tool for performing maintenance or service on the sander or polisher

3.1.4
control device
device to start and stop the sander or polisher or to change the direction of the rotation or to control the functional characteristics, such as speed and power

© ISO 2011 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS EN ISO 11148-8:2011