EESTI STANDARD EVS-EN 60745-2-3:2007

Elektrimootoriga töötavate käeshoitavate tööriistade ohutus. Osa 2-3: Erinõuded lihvmasinatele, ketaslihvpinkidele ja poleerimisseadmetele

Hand-held motor-operated electric tools - Safety Part 2-3: Particular requirements for grinders, polishers and disk-type sanders

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 60745-2-3:2007 sisaldab Euroopa standardi EN 60745-2-3:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 27.04.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 60745-2-3:2007 consists of the English text of the European standard EN 60745-2-3:2007. This document is endorsed on 27.04.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This standard applies to grinders, with a rated speed not exceeding a peripheral speed of the accessory of 80 m/s at rated capacity, polishers and disk-type sanders, including angle, straight and vertical. This standard applies to tools with a rated capacity not exceeding 230 mm.	**Scope:** This standard applies to grinders, with a rated speed not exceeding a peripheral speed of the accessory of 80 m/s at rated capacity, polishers and disk-type sanders, including angle, straight and vertical. This standard applies to tools with a rated capacity not exceeding 230 mm.

ICS 25.140.20

Võtmesõnad: definition, definitions, electric appliances, electric tools, grinders, grinding machines (tools), manual controls, pedestrian- controlled systems, polishing machines, safety, safety requirements, sanders, specification (approval), specifications

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60745-2-3

March 2007

ICS 25.140.20

Supersedes EN 50144-2-3:2002 + A1:2002 + A2:2003

English version

Hand-held motor-operated electric tools - Safety - Part 2-3: Particular requirements for grinders, polishers and disk-type sanders

(IEC 60745-2-3:2006, modified)

Outils électroportatifs à moteur - Sécurité - Partie 2-3: Règles particulières pour les meuleuses, lustreuses et ponceuses du type à disque (CEI 60745-2-3:2006, modifiée)

Handgeführte motorbetriebene Elektrowerkzeuge - Sicherheit - Teil 2-3: Besondere Anforderungen für Schleifer, Polierer und Schleifer mit Schleifblatt (IEC 60745-2-3:2006, modifiziert)

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 60745-2-3:2007 E

Foreword

The text of the International Standard IEC 60745-2-3:2006, prepared by SC 61F, Safety of hand-held motor-operated electric tools, of IEC TC 61, Safety of household and similar electrical appliances, together with the common modifications prepared by the Technical Committee CENELEC TC 61F, Safety of hand-held and transportable motor-operated electric tools, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60745-2-3 on 2006-12-01.

This European Standard supersedes EN 50144-2-3:2002 + A1:2002 + A2:2003.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2007-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-12-01

This standard is divided into two parts:

Part 1: General requirements which are common to most hand-held electric motor operated tools (for the purpose of this standard referred to simply as tools) which could come within the scope of this standard;

Part 2: Requirements for particular types of tools which either supplement or modify the requirements given in Part 1 to account for the particular hazards and characteristics of these specific tools.

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 98/37/EC (Machinery Directive), amended by Directive 98/79/EC. See Annex ZZ.

Compliance with the clauses of Part 1 together with this Part 2 provides one means of conforming with the essential health and safety requirements of the Directive concerned.

CEN/TC 255 is producing standards for non-electric grinders (EN 792-7), polishers and sanders (EN 792-8) and die grinders (EN 792-9).

Warning: Other requirements and other EC Directives can be applicable to the products falling within the scope of this standard.

This standard follows the overall requirements of EN ISO 12100-1 and EN ISO 12100-2.

This Part 2-3 is to be used in conjunction with EN 60745-1:2006. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

Subclauses, tables and figures which are additional to those in Part 1 are numbered starting from 101.

Subclauses, tables and figures which are additional to those in IEC 60745-2-3:2006 are prefixed “Z”.

Annexes ZA and ZZ have been added by CENELEC.

NOTE In this standard the following print types are used:
- Requirements proper;
- *Test specifications;*
- Explanatory matter.

Endorsement notice

The text of the International Standard IEC 60745-2-3:2006 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

6 Void

***Replace** by:*

6 Environmental requirements

This clause of Part 1 is applicable except as follows:

6.1.2.4 *Modification:*

Grinders, polishers and disk-type sanders are suspended. For angle and vertical tools, the wheel or pad shall be horizontal. For straight tools, the wheel or pad shall be vertical.

6.1.2.5 *Modification:*

Grinders, polishers and disk-type sanders are tested at no-load.

6.2.4.2 Location of measurement

Addition:

Figures Z104 to Z106 show the positions for different types of tools.

6.2.6.3 Operating conditions

Addition:

The weight of the tool is considered the weight of the complete tool as prepared for the test with all equipment needed for normal use and with the artificial wheel mounted, but without the cable.

6.2.6.3.101 Grinding

Tools for grinding applications shall be tested under load by using the artificial wheel under the conditions described below in Table Z101 for angle grinding and in Table Z104 for straight grinding.

Table Z101 – Test conditions for angle grinding

Orientation	Tool to be held as in normal use for grinding a horizontal plate.
Tool bit	Artificial wheel as specified in Figure Z102 of a diameter equivalent to the rated capacity and dimensions in accordance with Table Z102. When using the artificial wheel, start with a diameter (*e* -1 mm) and increase the size at the hole in stages of 1/10 mm until the required unbalance is obtained.
Feed force	Applied at a position as close as that in normal use. The feed force is specified in Table Z103 and obtained by applying an upward force equal to the sum of the intended feed force and the weight of the tool. The upward force is normally applied using the threaded holes for the support handle. For tools where the support handle can be mounted on either side, insert an extra bolt in the empty hole. Fix a short sling of cord from the extra bolt to the inner part of the support handle. Fix the cord used for applying the upward force in that sling. On tools with antivibration handles, the sling shall be attached between the tool body and the handle without blocking the antivibration function. The tool being suspended on a cord, the force can be applied using a weight (see Figure Z101) or, alternatively, a dynamometer can be attached to the cord. The application of force shall be achieved with minimum adaptation to the machine. NOTE Any weight added to the tool e.g. fixing devices for the upward force will alter the inertia of the tool and thereby reduce the vibration magnitude.
Test cycle	A test cycle is given by conducting a measurement for at least 10 s. After each test the wheel shall be loosened and repositioned 360° / 5 = 72° from its previous position on the shaft. Three series of five consecutive tests shall be carried out using a different operator for each series.

Table Z102 – Dimensions of the artificial wheel of Figure Z102 for angle grinding

ø a mm	***ø b*** mm	***c*** mm	***ø d*** mm	***ø e*** mm	**Unbalance** g mm
50 ± 0,2	10,0	6 ± 0,05	35 ± 0,02	8,1	14,5
100 ± 0,2	16,0	6 ± 0,05	70 ± 0,02	11,4	58
115 ± 0,2	22,23	6 ± 0,05	80 ± 0,02	12,2	76
125 ± 0,2	22,23	6 ± 0,05	90 ± 0,02	12,5	90
150 ± 0,2	22,23	6 ± 0,05	120 ± 0,02	13,0	130
180 ± 0,2	22,23	6 ± 0,05	150 ± 0,02	14,1	190
230 ± 0,2	22,23	6 ± 0,05	200 ± 0,02	15,5	305
300 ± 0,2	22,23	6 ± 0,05	270 ± 0,02	17,4	520

Table Z103 – Feed force

ø *a* mm	50	80	100	115	125	150	180	200	230	300
Feed force N (± 5 N)	15	15	40	40	40	40	60	60	60	60

Table Z104 – Test conditions for straight grinding

Orientation	Tool to be held as in normal use for grinding a horizontal plate. For grinders with a rated capacity up to or equal 55 mm, the test shall be carried out under load by using the artificial wheel. For grinders with a rated capacity exceeding 55 mm diameter, the test shall be carried out under load by using the artificial wheel, but at the speed achieved at under normal load (for example by reducing the supply voltage).
Tool bit	Artificial wheel as specified in Figure Z103 of a diameter equivalent to the rated capacity and dimensions in accordance with Table Z105. When using the artificial wheel, start with a diameter (*e* -1 mm) and increase the size at the hole in stages of 1/10 mm until the required unbalance is obtained.
Feed force	Applied at a position as close as that in normal use. For a rated capacity less than or equal to 55 mm, the feed force is 20 N, and for a rated capacity exceeding 55 mm, the feed force is 50 N. The feed force is obtained by applying an upward force equal to the sum of the intended feed force and the weight of the tool. The upward force is applied to the front part of the handle or gripping area closest to the wheel. On tools with antivibration handles, the upward force shall be applied without blocking the antivibration function. The force can be applied using a weight (see Figure Z101) or, alternatively, a dynamometer can be attached. The application of force shall be achieved with minimum adaptation to the machine. NOTE Any weight added to the tool e.g. fixing devices for the upward force will alter the inertia of the tool and thereby reduce the vibration magnitude.
Test cycle	A test cycle is given by conducting a measurement for at least 10 s.

Table Z105 – Dimensions of the artificial wheel of Figure Z103 for straight grinding

ø a mm	***ø b*** mm	***c*** mm	***ø d*** mm	***ø e*** mm	**Unbalance** g mm
25 ± 0,2	4,0	10 ± 0,05	18 ± 0,02	4,3	3,6
50 ± 0,2	4,0	10 ± 0,05	35 ± 0,02	6,2	14,5
80 ± 0,2	4,0	10 ± 0,05	65 ± 0,02	7,1	37
100 ± 0,2	19,0	25 ± 0,05	70 ± 0,02	5,6	58
125 ± 0,2	19,0	25 ± 0,05	90 ± 0,02	6,1	90
150 ± 0,2	19,0	25 ± 0,05	120 ± 0,02	6,4	130
200 ± 0,2	19,0	25 ± 0,05	170 ± 0,02	7,1	230

6.2.6.3.102 Polishing

Tools for polishing applications are tested under load and under the conditions described below in Table Z106.

Table Z106 – Test conditions for polishing

Orientation	Polishing a horizontal steel plate of min. 200 mm x 200 mm x 20 mm mounted on a bench
Tool bit	Polishing pad
Feed force	50 N ± 5 N (in addition to the weight of the tool) or the force necessary to obtain rated input, whichever is the lower
Test cycle	A test cycle is given by conducting a measurement for at least 10 s

6.2.6.3.103 Disc-type sanding

Tools for disc-type sanding applications are tested under load and under the conditions described below in Table Z107.

Table Z107 – Test conditions for disc-type sanding

Orientation	Sanding a horizontal steel plate of min. 200 mm x 200 mm x 20 mm mounted on a bench
Tool bit	Recommended sanding disc for steel with a grain size of 180
Feed force	30 N ± 5 N (in addition to the weight of the tool)
Pre-test requirements	With a new sanding disc carry out 1 min sanding before starting measurements
Test cycle	A test cycle is given by conducting a measurement for at least 10 s

6.2.6.4 Operator

Replacement:

The vibration of the machine is influenced by the operators. The operators shall therefore be skilled enough to be able to hold the tool in a manner similar to that used in real grinding. Also the angle of attack should equal to that used in real grinding on a horizontal surface (e.g. for angle grinders 20° ± 5°).

The forces and torques applied to the handles influence the vibration. It is therefore important that the force and torque distribution between the handles equals that in real use.

6.2.7.1 Reported vibration value

Addition:

If more than one operating mode was measured, the result a_h for each operating mode applicable shall be reported.

$a_{h,SG}$ or $a_{h,AG}$ = mean vibration for straight grinding or angle grinding in accordance with 6.2.6.3.101

$a_{h,P}$ = mean vibration for polishing in accordance with 6.2.6.3.102

$a_{h,DS}$ = mean vibration for disc-type sanding in accordance with 6.2.6.3.103

Underestimation of the vibration for tools equipped with technical means to automatically reduce unbalances shall be taken into account by multiplying the vibration values of such tools with a correction factor of 1,3.

In cases, where the measurement was done at practical use with specific discs, information about the operating conditions (such as specification of the disk used, work piece material, feed force) shall be reported.

6.2.7.2 Declaration of the vibration emission value

Addition:

For the following applications of the tool, if recommended in the instruction manual, the vibration emission values of the handle with the highest emission and the uncertainty *K* shall be declared:

- for grinding applications
  the value of $a_{h,SG}$ or $a_{h,AG}$ with the work mode description “surface grinding”;
- for polishing applications
  the value of $a_{h,P}$ with the work mode description “polishing”;
- for disc type sanding applications
  the value of $a_{h,DS}$ with the work mode description “disc sanding”.

In addition, the information shall be given in the instruction manual that other applications such as cutting-off or wire brushing, may have different vibration emission values.

21 Construction

21.Z1 *Addition:*

Disc-type sanders exclusively for sanding wooden floors are considered to be tools where a considerable amount of dust is produced.

Replace *21.18.1 by the following:*

21.18.1 *Replacement:*

The switch shall be of momentary contact type.

For single phase angle grinders with a rated capacity greater than 155 mm and for single phase straight grinders with a rated capacity greater than 130 mm, either

- the mains switch shall automatically switch off the motor as soon as the actuating member of the switch is released and shall have no locking arrangement in the “on” position

or

- the tool shall not restart after an interruption of the mains supply without releasing and reactuating the switch. In this case, a lock-on device is allowed provided that two dissimilar actions are necessary to lock the switch in the “on” position. In addition, only a single motion to the actuating member of the switch shall be required for the switch to automatically return to the “off” position.

For all other tools, a lock-on device is allowed provided that two dissimilar actions are necessary to lock the switch in the “on” position. In addition, only a single motion to the actuating member of the switch shall be required for the switch to automatically return to the “off” position.

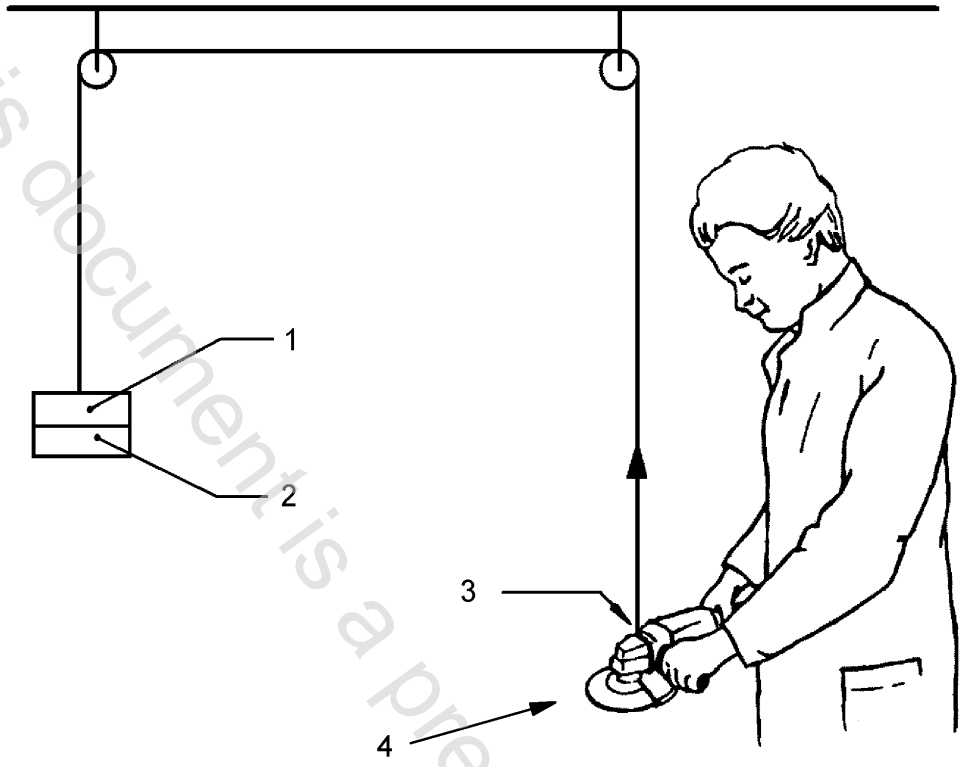
Compliance is checked by inspection and manual test.

Bibliography

***Add** the following note under IEC 60745-2-4:*

NOTE Harmonized as EN 60745-2-4:2003 (not modified).

Add *the following new figures:*



Key

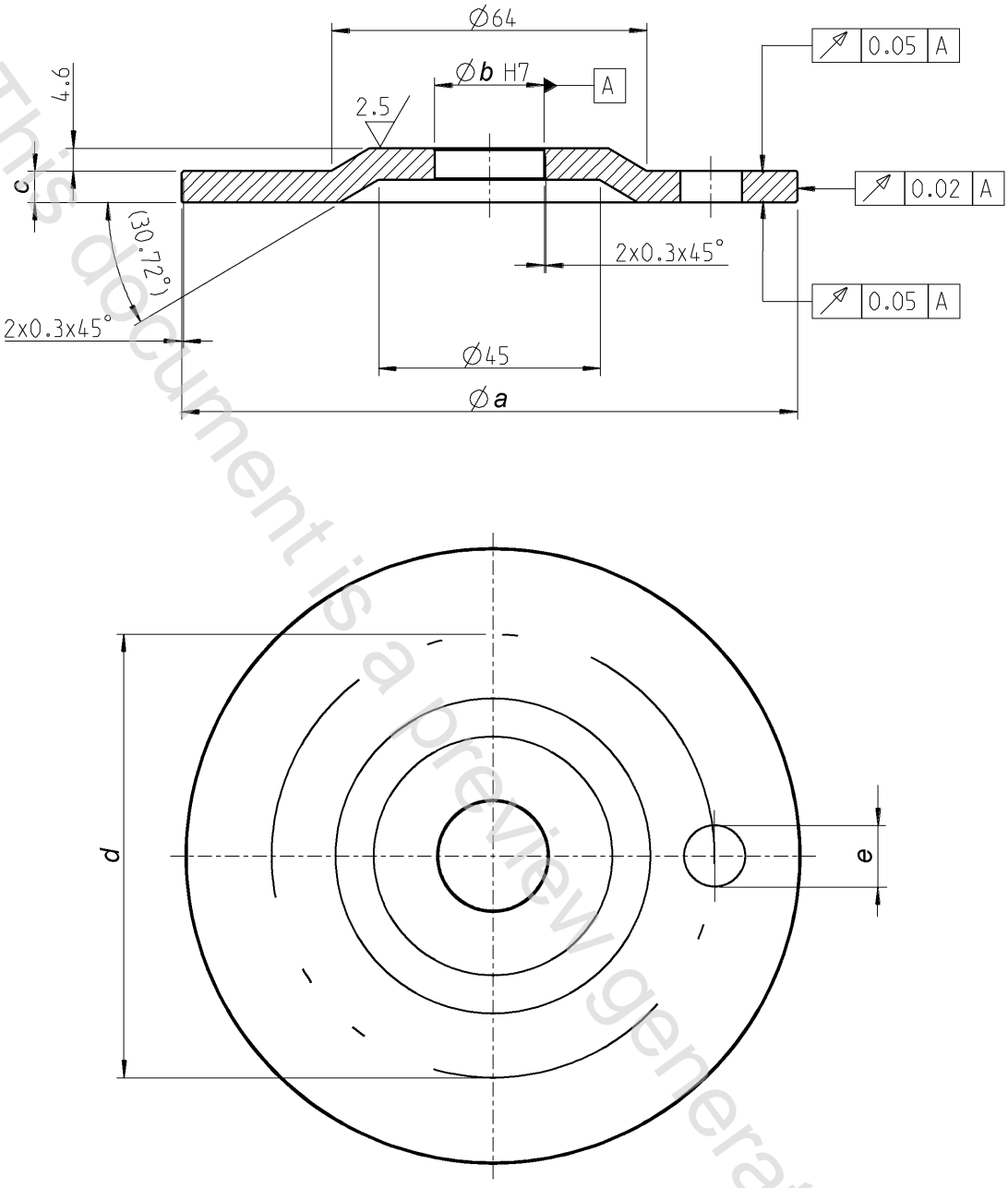
1 Weight of grinder

2 Feed force weight

3 Application of feed force using a sling of cord

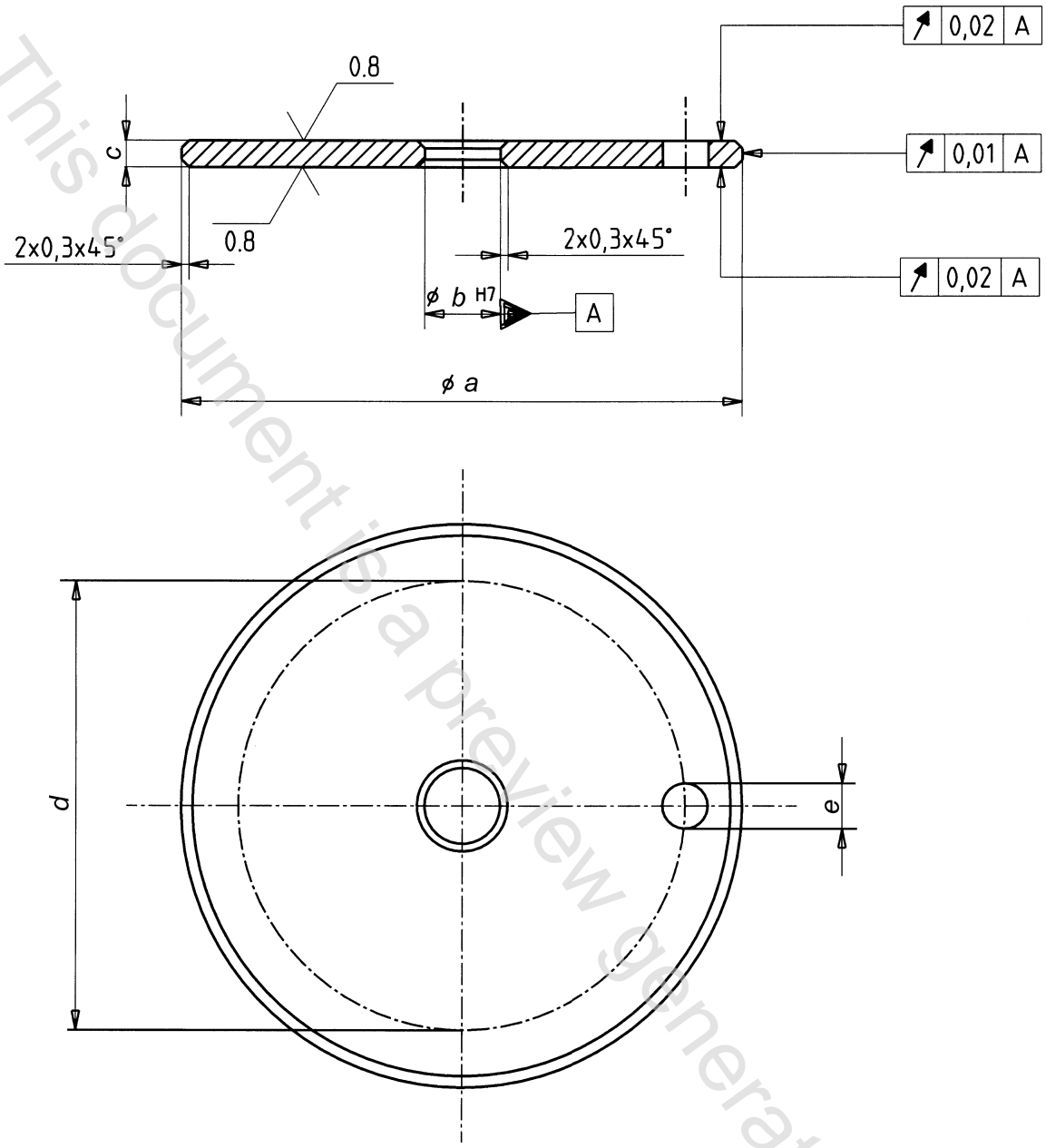
4 Grinder is suspended at an angle of 20° ± 5° to the horizontal

Figure Z101 – Working positions of operator and application of force



Dimensions in milimetres

Figure Z102 – Artificial grinding wheel for angle grinding



Material: aluminium

Dimensions in milimetres

Figure Z103 – Artificial grinding wheel for straight grinding

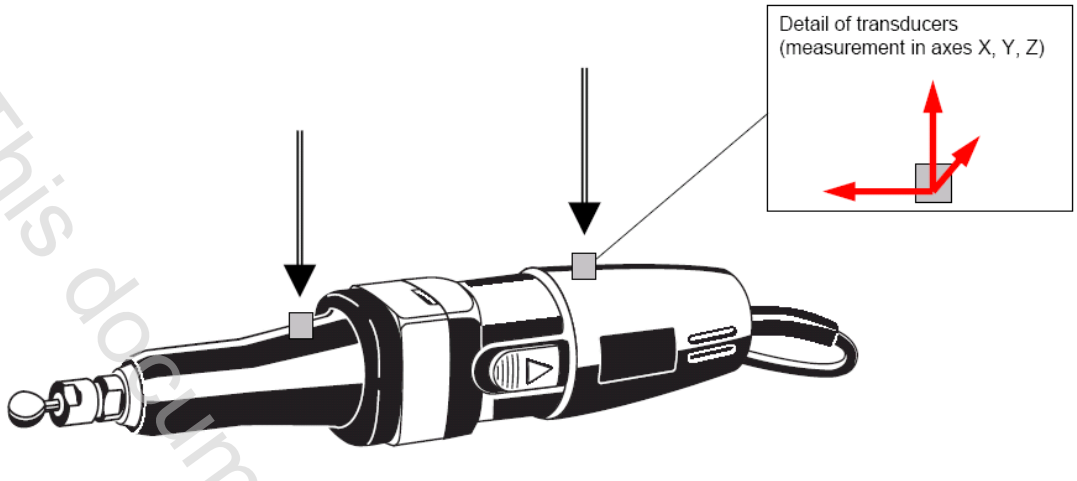


Figure Z104 – Positions of transducers for straight grinders

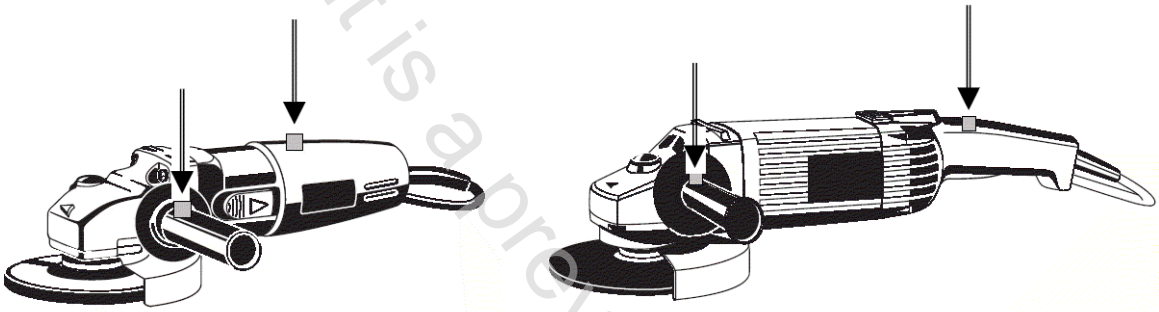
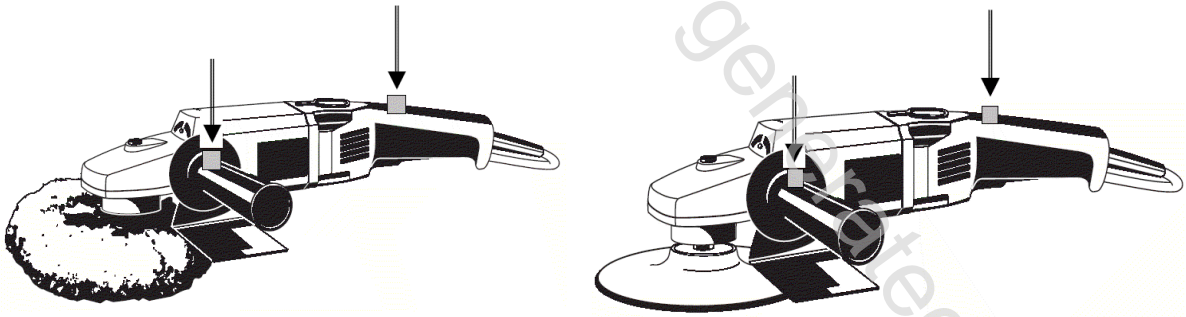


Figure Z105 – Positions of transducers for angle grinders



..

Figure Z106 – Positions of transducers for polishers and disk-type sanders

***Add** the following annexes:*

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
ISO 603-12	1999	Bonded abrasive products – Dimensions – Part 12: Grinding wheels for deburring and fettling on a straight grinder	-	-
ISO 603-14	1999	Bonded abrasive products – Dimensions – Part 14: Grinding wheels for deburring and fettling/snagging on an angle grinder	-	-
ISO 603-16	1999	Bonded abrasive products – Dimensions – Part 16: Grinding wheels for cutting-off on hand held power tools	-	-
ANSI B7.1	2000	Safety Requirements for the Use, Care and Protection of Abrasive Wheels	-	-

Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant essential requirements as given in Annex I of EC Directive 98/37/EC (Machinery Directive), amended by Directive 98/79/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directives concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60745-2-3

Deuxième édition
Second edition
2006-02

Outils électroportatifs à moteur –
Sécurité –

Partie 2-3:
Règles particulières pour les meuleuses, lustreuses et ponceuses du type à disque

Hand-held motor-operated electric tools –
Safety –

Part 2-3:
Particular requirements for grinders, polishers and disk-type sanders

Numéro de référence
Reference number
CEI/IEC 60745-2-3:2006

Numérotation des publications

Depuis le 1er janvier 1997, les publications de la CEI sont numérotées à partir de 60000. Ainsi, la CEI 34-1 devient la CEI 60034-1.

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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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SOMMAIRE

CONTENTS

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

OUTILS ÉLECTROPORTATIFS À MOTEUR – SÉCURITÉ –

Partie 2-3: Règles particulières pour les meuleuses, lustreuses et ponceuses du type à disque

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La Norme internationale CEI 60745-2-3 a été établie par le sous-comité 61F: Sécurité des outils électroportatifs à moteur, du comité d'études 61 de la CEI: Sécurité des appareils électrodomestiques et analogues.

Cette deuxième édition annule et remplace la première édition parue en 1984 et son amendement 1 (1995), dont elle constitue une révision technique. Les modifications principales comprennent l'Article 8: Marquages et instructions, introduisant le détail des mises en garde de sécurité, l'Article 19: Dangers mécaniques, avec des exigences pour les flasques, les arbres et les protecteurs et l'Article 20: résistance mécanique, avec des exigences et essai pour les protecteurs.

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

Part 2-3: Particular requirements for grinders, polishers and disk-type sanders

FOREWORD

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International Standard IEC 60745-2-3 has been prepared by subcommittee 61F: Safety of hand-held motor-operated electric tools, of IEC technical committee 61: Safety of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 1984 and its amendment 1 (1995). It constitutes a technical revision. Main changes include Clause 8: Markings and instructions, introducing detailed safety warnings, Clause 19: Mechanical hazards, with requirements for flanges, spindles and guards and Clause 20: Mechanical strength, with requirements and test for guards.

Le texte de cette Norme est basé sur les documents suivants:

FDIS	Rapport de vote
61F/624/FDIS	61F/634/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette norme.

Cette publication a été rédigée selon les Directives ISO/CEI, Partie 2.

Cette partie 2 doit être utilisée conjointement à la dernière édition de la CEI 60745-1*, Outils électroportatifs à moteur – Sécurité – Partie 1: Exigences générales,* et ses amendements. Elle a été établie sur la base de la troisième édition (2001) de la présente norme.

NOTE 1 L'expression «Partie 1» utilisée dans la présente norme fait référence à la CEI 60745-1.

La présente partie 2 complète ou modifie les articles correspondants de la CEI 60745-1, de façon à transformer cette publication en norme CEI: Règles particulières pour les meuleuses, lustreuses et ponceuses du type à disque

Lorsqu'un paragraphe particulier de la Partie 1 n'est pas mentionné dans cette partie 2, ce paragraphe s'applique pour autant qu'il est raisonnable. Lorsque la présente norme spécifie «addition», «modification» ou «remplacement», le texte correspondant de la Partie 1 doit être adapté en conséquence.

NOTE 2 Le système de numérotation suivant est utilisé:

– paragraphes, tableaux et figures: ceux qui sont numérotés à partir de 101 sont complémentaires à ceux de la Partie 1;

– les annexes supplémentaires sont appelées AA, BB, etc.

NOTE 3 Dans la présente norme, les caractères d'imprimerie suivants sont utilisés:

– exigences: caractères romains;

– *modalités d'essais: caractères italiques*;

– notes: petits caractères romains.

Les mots en **gras** dans le texte sont définis à l'Article 3. Lorsqu'une définition concerne un adjectif, l'adjectif et le nom associé figurent également en gras.

La CEI 60745 comprend les parties suivantes, présentées sous le titre général *Outils électroportatifs à moteur – Sécurité:*

Partie 1: Règles générales
Partie 2-1: Règles particulières pour les perceuses
Partie 2-2: Règles particulières pour les visseuses
Partie 2-3: Règles particulières pour les meuleuses, lustreuses et ponceuses du type à disque
Partie 2-4: Règles particulières pour les ponceuses et lustreuses, autres que du type à disque
Partie 2-5: Règles particulières pour les scies circulaires et les couteaux circulaires
Partie 2-6: Règles particulières pour les marteaux
Partie 2-7: Règles particulières pour les pistolets pour liquides non inflammables
Partie 2-8: Règles particulières pour les cisailles à métaux et les grignoteuses
Partie 2-9: Règles particulières pour les taraudeuses
Partie 2-11: Règles particulières pour les scies alternatives (scies sauteuses et scies sabres)
Partie 2-12: Règles particulières pour les vibreurs à béton

The text of this standard is based on the following documents:

FDIS	Report on voting
61F/624/FDIS	61F/634/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This part 2 is to be used in conjunction with the latest edition of IEC 60745-1*, Hand-held motor-operated electric tools – Safety – Part 1: General requirements,* and its amendments. It was established on the basis of the third edition (2001) of that standard.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to IEC 60745-1.

This part 2 supplements or modifies the corresponding clauses of IEC 60745-1, so as to convert that publication into the IEC standard: Safety for grinders, polishers and disk-type sanders.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

– subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;

– additional annexes are lettered AA, BB, etc.

NOTE 3 In this standard, the following print types are used:

– requirements: in roman type;

– *test specifications: in italic type*;

– notes: in smaller roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

IEC 60745 consists of the following parts, under the general title *Hand-held motor-operated electric tools – Safety:*

Part 1: General requirements
Part 2-1: Particular requirements for drills and impact drills
Part 2-2: Particular requirements for screwdrivers and impact wrenches
Part 2-3: Particular requirements for grinders, polishers and disk-type sanders
Part 2-4: Particular requirements for sanders and polishers other than disk type
Part 2-5: Particular requirements for circular saws and circular knives
Part 2-6: Particular requirements for hammers
Part 2-7: Particular requirements for spray guns for non-flammable liquids
Part 2-8: Particular requirements for shears and nibblers
Part 2-9: Particular requirements for tappers
Part 2-11: Particular requirements for reciprocating saws (jig and sabre saws)
Part 2-12: Particular requirements for concrete vibrators

Partie 2-13: Règles particulières pour les scies à chaîne

Partie 2-14: Règles particulières pour les rabots

Partie 2-15: Règles particulières pour les taille-haies et ciseaux à gazon

Partie 2-16: Règles particulières pour les agrafeuses

Partie 2-17: Règles particulières pour les défonceuses et les affleureuses

Partie 2-18: Règles particulières pour les outils de cerclage

Partie 2-19: Règles particulières pour les mortaiseuses

Partie 2-20: Règles particulières pour les scies à ruban

Partie 2-21: Règles particulières pour les curettes

Le comité a décidé que le contenu de cette publication ne sera pas modifié avant la date de maintenance indiquée sur le site web de la CEI sous «http://webstore.iec.ch» dans les données relatives à la publication recherchée. A cette date, la publication sera

- reconduite;
- supprimée;
- remplacée par une édition révisée, ou
- amendée.

Part 2-13: Particular requirements for chain saws

Part 2-14: Particular requirements for planers

Part 2-15: Particular requirements for hedge trimmers and grass shears

Part 2-16: Particular requirements for tackers

Part 2-17: Particular requirements for routers and trimmers

Part 2-18: Particular requirements for strapping tools

Part 2-19: Particular requirements for jointers

Part 2-20: Particular requirements for band saws

Part 2-21: Particular requirements for drain cleaners

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

OUTILS ÉLECTROPORTATIFS À MOTEUR – SÉCURITÉ –

Partie 2-3: Règles particulières pour les meuleuses, lustreuses et ponceuses du type à disque

1 Domaine d'application

L'article de la Partie 1 est applicable avec les exceptions suivantes:

1.1 *Addition:*

Cette norme s'applique aux meuleuses dont la vitesse assignée ne dépasse pas une vitesse périphérique de l'accessoire de 80 m/s à la capacité assignée, aux lustreuses et aux ponceuses du type à disque, y compris d'angle, droites et verticales. Cette norme s'applique aux outils dont la capacité assignée ne dépasse pas 230 mm.

Cette norme ne s'applique pas aux lustreuses à orbite aléatoire et aux ponceuses à orbite aléatoire. Ces dernières sont couvertes par la CEI 60745-2-4.

2 Références normatives

L'article de la Partie 1 est applicable avec les exceptions suivantes:

Addition:

ISO 603-12:1999, *Produits abrasifs agglomérés – Dimensions – Partie 12: Meules pour ébarbage et ébavurage sur meuleuses portatives droites*

ISO 603-14:1999, *Produits abrasifs agglomérés – Dimensions – Partie 14: Meules pour ébarbage et ébavurage sur meuleuses portatives à renvoi d'angle*

ISO 603-16:1999, *Produits abrasifs agglomérés – Dimensions – Partie 16: Meules pour tronçonnage sur machines portatives*

ANSI B7.1:2000, *Safety Requirements for the Use, Care and Protection of Abrasive Wheels*

3 Définitions

L'article de la Partie 1 est applicable avec les exceptions suivantes:

3.101
buvard
pièce mince en matériau facilement compressible située entre l'outil abrasif et le flasque

3.102
ponceuse du type à disque
outil, construit comme une meuleuse, prévu pour le ponçage

HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

Part 2-3: Particular requirements for grinders, polishers and disk-type sanders

1 Scope

This clause of Part 1 is applicable, except as follows:

1.1 *Addition:*

This standard applies to grinders, with a rated speed not exceeding a peripheral speed of the accessory of 80 m/s at rated capacity, polishers and disk-type sanders, including angle, straight and vertical. This standard applies to tools with a rated capacity not exceeding 230 mm.

This standard does not apply to random-orbit polishers and random-orbit sanders. These are covered by IEC 60745-2-4.

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

ISO 603-12:1999, *Bonded abrasive products – Dimensions – Part 12: Grinding wheels for deburring and fettling on a straight grinder*

ISO 603-14:1999, *Bonded abrasive products – Dimensions – Part 14: Grinding wheels for deburring and fettling/snagging on an angle grinder*

ISO 603-16:1999, *Bonded abrasive products – Dimensions – Part 16: Grinding wheels for cutting-off on hand held power tools*

ANSI B7.1:2000, *Safety Requirements for the Use, Care and Protection of Abrasive Wheels*

3 Definitions

This clause of Part 1 is applicable, except as follows:

3.101
blotter
thin piece of an easily compressible material, between the abrasive product and flange

3.102
disk-type sander
tool, constructed like a grinder, intended for sanding