

# SLOVENSKI STANDARD

## SIST EN IEC 62841-2-3:2021

01-julij-2021

### Nadomešča:

SIST EN 60745-2-3:2011

SIST EN 60745-2-3:2011/A11:2014

SIST EN 60745-2-3:2011/A12:2015

SIST EN 60745-2-3:2011/A13:2016

SIST EN 60745-2-3:2011/A2:2014

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**Elektromotorna ročna orodja, prenosna orodja ter stroji za trato in vrt - Varnost - 2-3. del: Posebne zahteve za ročne brusilnike, diskovne polirnike in diskovne brusilnike**

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Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 2-3: Particular requirements for hand-held grinders, disc-type polishers and disc-type sanders

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Elektrische motorbetriebene handgeführte Werkzeuge, transportable Werkzeuge und Rasen- und Gartenmaschinen - Sicherheit - Teil 2-3: Besondere Anforderungen für handgeführte Schleifer, Polierer mit Polierscheibe und Schleifer mit Schleifblatt

**Ta slovenski standard je istoveten z: EN IEC 62841-2-3:2021**

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### ICS:

25.080.50	Brusilni in polirni stroji	Grinding and polishing machines
25.140.20	Električna orodja	Electric tools

**SIST EN IEC 62841-2-3:2021**

**en**

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EUROPEAN STANDARD

EN IEC 62841-2-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2021

ICS 25.140.20

Supersedes EN 60745-2-3:2011 and all of its  
amendments and corrigenda (if any)

English Version

**Electric motor-operated hand-held tools, transportable tools and  
lawn and garden machinery - Safety - Part 2-3: Particular  
requirements for hand-held grinders, disc-type polishers and  
disc-type sanders  
(IEC 62841-2-3:2020)**

Outils électroportatifs à moteur, outils portables et machines  
pour jardins et pelouses - Sécurité - Partie 2-3: Exigences  
particulières pour les meuleuses portatives et pour les  
lustreuses et ponceuses portatives du type à disque  
(IEC 62841-2-3:2020)

Elektrische motorbetriebene handgeführte Werkzeuge,  
transportable Werkzeuge und Rasen- und  
Gartenmaschinen - Sicherheit - Teil 2-3: Besondere  
Anforderungen für handgeführte Schleifer, Polierer mit  
Polierscheibe und Schleifer mit Schleifblatt  
(IEC 62841-2-3:2020)

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This European Standard was approved by CENELEC on 2020-05-19. CENELEC 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.

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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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 62841-2-3:2021 (E)****European foreword**

The text of document 116/444/FDIS, future edition 1 of IEC 62841-2-3, prepared by IEC/TC 116 "Safety of motor-operated electric tools" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62841-2-3:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-05-03 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2025-05-03 document have to be withdrawn

This document supersedes EN 60745-2-3:2011 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of EN IEC 62841-2-3:2021/A11:2021.

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The text of the International Standard IEC 62841-2-3:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60086-1	NOTE	Harmonized as EN 60086-1
IEC 61010-031	NOTE	Harmonized as EN 61010-031
IEC 61439-1	NOTE	Harmonized as EN 61439-1
IEC 62368-1	NOTE	Harmonized as EN IEC 62368-1
ISO 13857:2019	NOTE	Harmonized as EN ISO 13857:2019 (not modified)



IEC 62841-2-3

Edition 1.0 2020-04

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –  
Part 2-3: Particular requirements for hand-held grinders, disc-type polishers and disc-type sanders**

[SIST EN IEC 62841-2-3:2021](https://standards.iteh.ai/catalog/standards/sist/fl439424-c99c-42da-a9db-9128-5845/iec-62841-2-3-2021)

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**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –  
Partie 2-3: Exigences particulières pour les meuleuses portatives et pour les lustreuses et ponceuses portatives du type à disque**

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COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –****Part 2-3: Particular requirements for hand-held grinders, disc-type polishers and disc-type sanders**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62841-2-3 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools.

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

FDIS	Report on voting
116/444/FDIS	116/454/RVD

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

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

This Part 2-3 is to be used in conjunction with the first edition of IEC 62841-1:2014.

This Part 2-3 supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for hand-held grinders, disc-type polishers and disc-type sanders.

Where a particular subclause of Part 1 is not mentioned in this Part 2-3, that subclause applies as far as relevant. Where this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

The terms in **bold typeface** in the text are defined in Clause 3

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

A list of all parts of the IEC 62841 series, under the general title: *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability 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, <https://standards.iteh.ai/catalog/standards/sist/f1439424-c99c-42da-a9db-8d3be58445ca/sist-en-iec-62841-2-3-2021>
- withdrawn,
- replaced by a revised edition, or
- amended.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 36 months from the date of publication.

The contents of the corrigendum of April 2021 have been included in this copy.

## ELECTRIC MOTOR-OPERATED HAND-HELD TOOLS, TRANSPORTABLE TOOLS AND LAWN AND GARDEN MACHINERY – SAFETY –

### Part 2-3: Particular requirements for hand-held grinders, disc-type polishers and disc-type sanders

#### 1 Scope

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

*Addition:*

This part of IEC 62841 applies to hand-held **grinders**, **disc-type polishers** and **disc-type sanders**, including angle, straight and vertical tools, intended for use on various materials except magnesium, with a **rated capacity** not exceeding 230 mm. For **grinders**, the **rated no-load speed** does not exceed a peripheral speed of the **accessory** of 80 m/s at **rated capacity**.

This standard does not apply to dedicated cut-off machines.

NOTE 101 It is planned that a document on cut-off machines will be published.

This standard does not apply to orbital polishers and orbital sanders.

NOTE 102 It is planned that a document on orbital polishers and orbital sanders will be published.

This standard does not apply to die grinders.

NOTE 103 Die grinders are covered by IEC 62841-2-23.

#### 2 Normative references

This clause of Part 1 is applicable except as follows:

*Addition:*

ISO 525:2013, *Bonded abrasive products – General requirements*

#### 3 Terms and 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

##### **diamond wheel**

metal wheel with continuous or segmented diamond abrasives

**3.102.1****diamond cutting wheel**

metal wheel with the abrasives located on the periphery of the wheel

**3.102.2****diamond grinding wheel**

metal wheel with abrasives located on the face of the wheel

**3.103****disc-type polisher**

tool equipped with a rotating flexible disc or pad intended for polishing

Note 101 to entry: Polishing is an operation to produce a smooth or shiny surface.

**3.104****disc-type sander**

tool, constructed like a **grinder**, intended for sanding

Note 101 to entry: Sanding is an operation to remove material using flexible abrasive material, such as sandpaper.

**3.105****flange**

collar, disc or plate between or against which wheels are mounted

**3.105.1****unrecessed (flange)**

**flange** fixed to the machine spindle having an **unrecessed** flat surface against which a threaded hole abrasive product is screwed, e.g. a cup wheel, a cone or a plug

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**3.105.2****inner flange**

**flange** which contacts and provides support to the back side of the wheel and is located on the spindle between wheel and tool

**3.105.3****outer flange**

**flange** which supports the front side of the wheel and secures and clamps the wheel to the spindle and the **inner flange**

Note 101 to entry: In Canada and the United States of America, the following additional definition applies:

**3.105.UC1****adaptor backing flange**

**inner flange** which contacts and supports in the hub area and extends past the raised portion to reduce the flexing of the wheel periphery

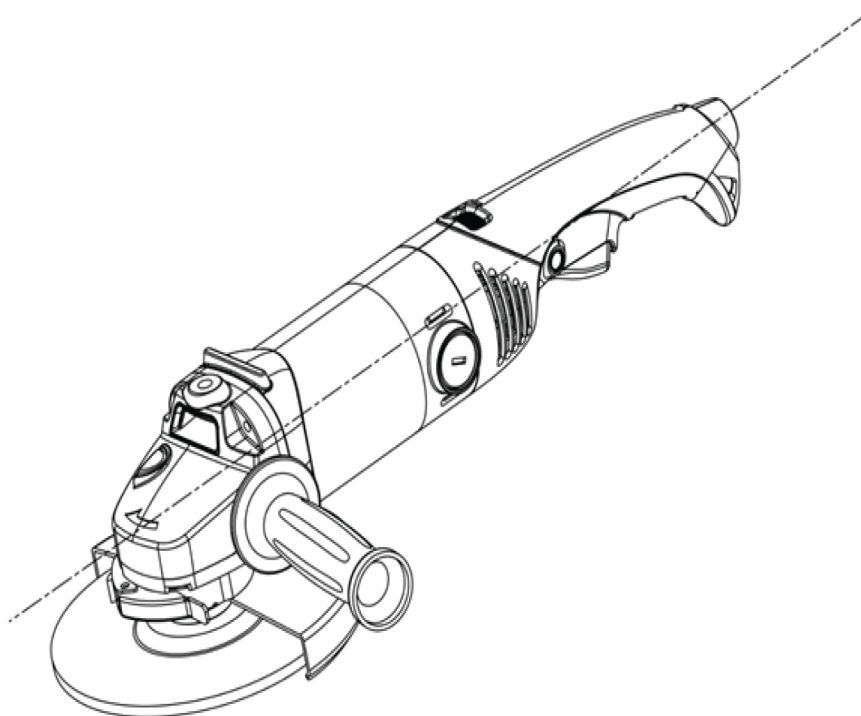
**3.106****grinder**

tool driving a rotating spindle on which a bonded abrasive product or a **diamond wheel** is mounted

**3.106.1****angle grinder**

**grinder** with the rotating spindle at an angle to the axis of the tool body which acts as a grasping surface, intended for peripheral and lateral grinding

Note 101 to entry: See Figure 101.



IEC

**Figure 101 – Example of an angle grinder**  
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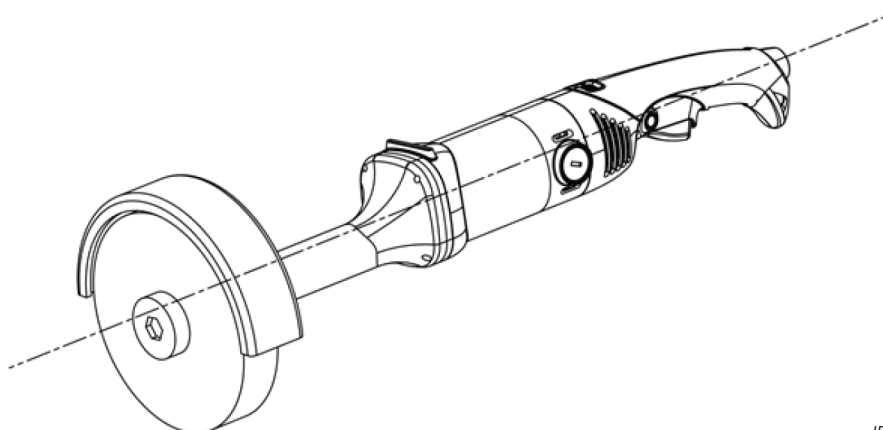
### 3.106.2

#### straight grinder

**grinder** with the rotating spindle in-line with the axis of the tool body which acts as a grasping surface, intended for peripheral grinding only and not equipped with a collet or chuck

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Note 101 to entry: See Figure 102.



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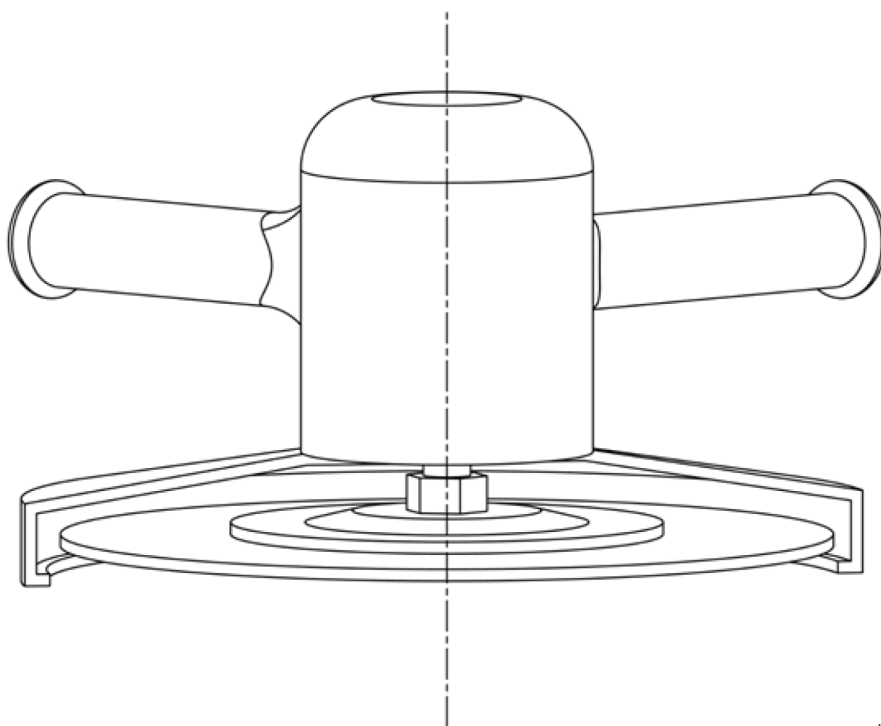
**Figure 102 – Example of a straight grinder**

### 3.106.3

#### vertical grinder

**grinder** with the rotating spindle in-line with the axis of the tool body and with handles that are substantially perpendicular to the axis of the rotating spindle, intended for peripheral and lateral grinding

Note 101 to entry: See Figure 103.



IEC

**Figure 103 – Example of a vertical grinder**  
(standards.iteh.ai)

**3.107****guide plate**

flat plate on the machine which rests on the material to be cut

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**3.108****guide roller**

roller on the machine which rests on the material to be cut

**3.109****minor fragment**

particles less than 1/16 of the mass of the abrasive wheel

**3.110****rated capacity**

maximum diameter of the rotating **accessory** to be fitted on the tool as specified by the manufacturer's instruction

**3.111****wheel guard**

device which partly encloses the abrasive wheel and gives protection to the operator

**3.112****wheel types**

alphanumeric designation of wheels based upon application and shape

Note 101 to entry: Shapes for **wheel types** are given in Annex CC.

## 4 General requirements

This clause of Part 1 is applicable.

## 5 General conditions for the tests

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

### 5.17 Addition:

*The mass of a **grinder** includes the **wheel guard**, the **flanges** and the handles.*

*The mass of a **disc-type polisher** or **disc-type sander** includes the **flanges** and the handles.*

## 6 Radiation, toxicity and similar hazards

This clause of Part 1 is applicable.

## 7 Classification

This clause of Part 1 is applicable.

## 8 Marking and instructions

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

### 8.1 Addition:


Tools shall also be marked with:

- **rated no-load speed**;
- **rated capacity**.

NOTE 101 The requirement for marking **rated capacity** does not prohibit the additional marking of smaller permitted diameters of the rotating **accessory** other than **rated capacity** (e.g. 115 mm / 125 mm, where 125 mm is the **rated capacity**).

### 8.2 Addition:


Tools shall also be marked with:

“ **WARNING** Always wear eye protection” or sign M004 of ISO 7010 or the following safety sign:



The eye protection symbol may be modified by adding other personal protective equipment such as ear protection, dust mask, etc.

Tools that require at least two handles in accordance with 19.4 shall be marked with

- “ **WARNING** Always operate with two hands”; or
- the following safety sign: