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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 - Dopolnilo A11**

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

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

[SIST EN IEC 62841-2-3:2021/A11:2021](https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-bea9-6bb0990b208c/sist-en-iec-62841-2-3-2021-a11-2021)

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

**Ta slovenski standard je istoveten z: EN IEC 62841-2-3:2021/A11:2021**

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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/A11:2021 en,fr**

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[SIST EN IEC 62841-2-3:2021/A11:2021](https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-beaa-c0b0990b20ec/sist-en-iec-62841-2-3-2021-a11-2021)

<https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-beaa-c0b0990b20ec/sist-en-iec-62841-2-3-2021-a11-2021>

EUROPEAN STANDARD

EN IEC 62841-2-3:2021/A11

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2021

ICS 25.140.20

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

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

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

This amendment A11 modifies the European Standard EN IEC 62841-2-3:2021; it was approved by CENELEC on 2021-05-03. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CENELEC member.

This amendment 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/A11:2021 (E)****European foreword**

This document (EN IEC 62841-2-3:2021/A11:2021) has been prepared by CLC/TC 116 “Safety and environmental aspects of motor-operated electric tools”.

The following dates are fixed:

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- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2025-05-03

This document modifies by common modifications EN IEC 62841-2-3:2021, which consists of the text of 116/444/FDIS (future IEC 62841-2-3, Ed 1) prepared by IEC/TC 116 “Safety of motor-operated electric tools”.

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 series is divided into four 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, 3 or 4: 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.

The Part 2-3 is to be used in conjunction with EN 62841-1:2015 and its amendments.

The Part 2-3 supplements or modifies the corresponding clauses in EN 62841-1:2015, so as to convert it into the European 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 Part 2-3, that subclause applies as far as relevant. When 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 smaller roman type.

The terms defined in Clause 3 are printed in **bold typeface**.

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

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62841-2-3:2020 are prefixed “Z”.

This document follows the overall requirements of EN ISO 12100.

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 this document.

Compliance with the clauses of Part 1 together with Part 2-3 provides one means of conforming with the essential health and safety requirements of the Directive concerned.

## **iTeh STANDARD PREVIEW** **(standards.iteh.ai)**

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<https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-beaa-c0b0990b20ec/sist-en-iec-62841-2-3-2021-a11-2021>

## EN IEC 62841-2-3:2021/A11:2021 (E)

**1 Modification to Clause 1, “Scope”**

*Add the following to the existing Clause 1:*

“This document covers all significant hazards, hazardous situations or hazardous events relevant for tools covered by this standard.

NOTE Z101 Essential requirements not mentioned in Table ZZ.1 are deemed to be not applicable, because the corresponding hazards are either not relevant for machines covered by this standard or do not require specific action by the designer.”

**2 Modification to Clause 2, “Normative references”**

*Add the following normative references:*

“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*”

**3 Modification to Clause 8, “Marking and instructions”**

*Add the following to 8.14.2 Za):*

“6) A warning that grinding thin sheets of metal or other easily vibrating structures with a large surface can result in a total noise emission much higher (up to 15 dB) than the declared noise emission values. Such workpieces should as far as possible be prevented from emitting sound by suitable measures such as the application of heavy flexible damping mats. The increased noise emission is also to be considered for both the risk assessment of noise exposure and selecting adequate hearing protection.”

[SIST EN IEC 62841-2-3:2021/A11:2021](https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-beaa-91400311-2021)

[https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-beaa-](https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-beaa-91400311-2021)

**4 Modification to Clause 19, “Mechanical hazards”**

*Replace the existing 19.104.2 with the following:*

“**19.104.2** The **flange** diameter for **wheel Type 1** that are thicker than 5 mm shall be:

$$D_f \geq 0,33D$$

The **flange** diameter for **wheel Type 1** that are 5 mm and thinner and **wheel Types 6, 11, 27, 28, 29, 41** and **42** shall be:

$$D_f = (20 \pm 1) \text{ mm} \quad \text{for } 55 \text{ mm} \leq D < 80 \text{ mm}$$

$$D_f = (20 \pm 1) \text{ mm} \quad \text{for } 80 \text{ mm} \leq D \leq 105 \text{ mm} \text{ for wheels with a bore diameter of } 10 \text{ mm (3/8 inch UNC)}$$

$$D_f = (29 \pm 1) \text{ mm} \quad \text{for } 80 \text{ mm} \leq D \leq 105 \text{ mm} \text{ for wheels with a bore diameter of } 16 \text{ mm (5/8 inch UNC)}$$

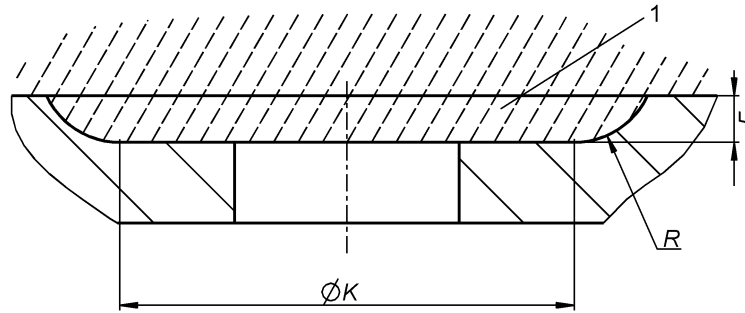
$$D_f = (41 \pm 1) \text{ mm} \quad \text{for } 105 \text{ mm} < D \leq 230 \text{ mm}$$

For **wheel Type 41** and **diamond wheels**, the  $D_f$  dimension may exceed the above values for **inner flanges** and **outer flanges**. For all other **wheel types**, the diameter  $D_f$  may exceed the above values for **inner flanges** only.

For **wheel Types 27, 28** and **42**: The outer dimensions of the **outer flange** shall be limited so that there is no interference with the depressed centre of wheels in accordance with ISO 603-14:1999 and ISO 603-16:1999 as illustrated in Figure Z101 with the dimensions  $\emptyset K$ ,  $R$  and  $F$  as specified in Table Z101.

Table Z101 — Dimensions of depressed centre wheels

Outside diameter of the abrasive wheel $D$ mm	$\varnothing K$ mm	Radius $R$ mm	$F$ mm
$\leq 80$	23	6	4
$> 80$ and $\leq 100$	35,5	6	4
$> 100$ and $\leq 230$	45	8	4,6

**Key**

- 1 area without interference  
 $\varnothing K$  diameter of the depressed centre bottom  
 $R$  radius  
 $F$  height of the depressed centre

Figure Z101 — Depressed centre of abrasive wheels  
<https://standards.iteh.ai/catalog/standards/sist/5459c41f-49d-4474-beaa-c0b0990b20ec/sist-en-iec-62841-2-3-2021-a11-2021>

**5 Modification to Clause 21, “Construction”**

Replace the existing subclause 21.35 with the following:

**“21.35 Modification:**

This subclause is applicable only for

- **disc-type sanders** used exclusively for sanding wooden floors in accordance with 8.14.2 b) 107); and
- **grinders** intended to be used with a **wheel guard** of Type E or Type F in accordance with 8.14.2 a) 101) and 8.14.2 b) 108).”

**6 Modifications to Annex I, “Measurement of noise and vibration emissions”**

Replace the title of Annex I with the following:

**“Annex I**  
(normative)

**Measurement of noise and vibration emissions”**

and **delete** the NOTE.

## EN IEC 62841-2-3:2021/A11:2021 (E)

**Replace the first paragraph and NOTE 1 of the existing subclause I.2.3.1 with the following:**

“The A-weighted emission sound pressure level at the work station,  $L_{pA}$ , shall be determined in accordance with EN ISO 11203:2009 as follows:

$$L_{pA} = L_{WA} - Q$$

where  $Q = 8$  dB.”

NOTE 1 This value of  $Q$  has been determined, during experimental investigations, to be applicable to **hand-held power tools**. The resulting A-weighted emission sound pressure level at the workstation is equivalent to the value of the surface sound pressure level at a distance of 0,7 m from the power tool. This distance has been chosen to give satisfactory reproducibility of results, and to permit comparison of the acoustic performance of different **hand-held power tools**, which do not, in general, have uniquely defined work stations. Under free field conditions, where it could be required to estimate the emission sound pressure level,  $L_{pA,r1}$ , at a distance  $r_1$  in m from the geometric centre of the power tool, this can be done by applying the formula:

$$L_{pA,r1} = L_{pA} + 20 \lg \left( \frac{0,7}{r_1} \right) \text{ dB}$$

”

**Replace the existing subclause I.2.4 with the following:**

#### **"I.2.4 Installation and mounting conditions of the power tools during noise tests**

*Addition:*

**Angle grinders** are suspended and fitted with an artificial wheel equivalent to the **rated capacity** as specified in Figure I.104 and Table I.102 for the application “grinding”. **Straight grinders** are suspended and fitted with an artificial wheel equivalent to the **rated capacity** as specified in Figure I.106 and Table I.105. **Disc-type polishers** are suspended and fitted with a lambswool polishing pad of **rated capacity**. **Disc-type sanders** are suspended and fitted with a sanding disc of **rated capacity**. For angle and vertical tools, the wheel or pad shall be horizontal. For straight tools, the wheel or pad shall be vertical.”

<https://standards.iteh.ai/catalog/standards/sist/5459c4ff-4f9d-4474-beaa-0b0997b26262/sist-en-iec-62841-2-3-2021/a11-2021>

## **7 Modification to Annex K, “Battery tools and battery packs”**

**Replace the NOTE 2 in K.21.18.1.1 with the following:**

#### **“K.21.18.Z101 Isolation and disabling device**

Tools with an **integral battery** shall either be equipped

- with an isolation device to prevent the risk of injury from mechanical hazards during servicing or **user maintenance**; or
- with a disabling device that prevents unintentional starting of the tool.

An isolation device shall

- provide disconnection of at least one pole of the **battery** from the serviceable region of the tool;
- be equipped with an unambiguous indication of the state of the disconnection device which corresponds to each position of its manual control (actuator);
- be provided with protection against accidental reconnection.

NOTE 1 Examples of methods to achieve this disconnection include removable jumpers, **integral batteries** that can be disconnected for servicing or **user maintenance**, or an electromechanical **power switch** with a direct mechanical link between the actuator and the contact.

NOTE 2 The risk of accidental reconnection for a **power switch** is addressed by the requirement of 21.18.1.2. The other examples in NOTE 1 achieve this by the necessary actions for reconnection.



A disabling device may be achieved by any of the following:

- a self-restoring or non-self-restoring lock-off device where two separate and dissimilar actions are necessary before the motor is switched on (e.g. a **power switch** which has to be pushed in before it can be moved laterally to close the contacts to start the motor). It shall not be possible to achieve these two actions with a single grasping motion or a straight-line motion;
- a removable disabling device provided with the tool where it shall not be possible for the tool to be operated when either applied or removed.

*Compliance is checked by inspection and by manual test.*

## 8 Modification to Annex L, “Battery tools and battery packs provided with mains connection or non-isolated sources”

*Replace the NOTE with the following:*

### “L.21.18.Z101 Isolation and disabling device

Tools with an **integral battery** shall either be equipped

- with an isolation device to prevent the risk of injury from mechanical hazards during servicing or **user maintenance**; or
- with a disabling device that prevents unintentional starting of the tool.

An isolation device shall

- provide disconnection of at least one pole of the **battery** from the serviceable region of the tool;
- be equipped with an unambiguous indication of the state of the disconnection device which corresponds to each position of its manual control (actuator);
- be provided with protection against accidental reconnection.

NOTE 1 Examples of methods to achieve this disconnection include removable jumpers, **integral batteries** that can be disconnected for servicing or **user maintenance**, or an electromechanical **power switch** with a direct mechanical link between the actuator and the contact.

NOTE 2 The risk of accidental reconnection for a **power switch** is addressed by the requirement of 21.18.1.2. The other examples in NOTE 1 achieve this by the necessary actions for reconnection.

A disabling device may be achieved by any of the following:

- a self-restoring or non-self-restoring lock-off device where two separate and dissimilar actions are necessary before the motor is switched on (e.g. a **power switch** which has to be pushed in before it can be moved laterally to close the contacts to start the motor). It shall not be possible to achieve these two actions with a single grasping motion or a straight-line motion;
- a removable disabling device provided with the tool where it shall not be possible for the tool to be operated when either applied or removed.

*Compliance is checked by inspection and by manual test.*

## EN IEC 62841-2-3:2021/A11:2021 (E)

## 9 Addition of the Annex ZA, “Normative references to international publications with their corresponding European publications”

Add the following Annex ZA:

“

### Annex ZA (normative)

#### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

Annex ZA of EN 62841-1:2015 is applicable, except as follows:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
<i>Addition:</i>				
ISO 525	2013	Bonded abrasive products – General requirements	-	-
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 6: Grinding wheels for cutting-off on hand-held power tools	-	-
-	-	Acoustics - Noise emitted by machinery and equipment - Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level	EN ISO 11203	2009

“