

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety –
Part 3-8: Particular requirements for transportable single spindle vertical moulders**

**Outils électroportatifs à moteur, outils portables et machines pour jardins et pelouses – Sécurité –
Partie 3-8: Exigences particulières pour les toupies monobroches à arbre vertical portables**





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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 25.140.20

ISBN 978-2-8322-9756-8

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 3-8: Particular requirements for
transportable single spindle vertical moulders**

FOREWORD

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IEC 62841-3-8 has been prepared by IEC technical committee 116: Safety of motor-operated electric tools. It is an International Standard.

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

Draft	Report on voting
116/814/FDIS	116/834/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is to be used in conjunction with IEC 62841-1:2014.

This document supplements or modifies the corresponding clauses in IEC 62841-1, so as to convert it into the IEC Standard: Particular requirements for transportable single spindle vertical moulders.

Where a particular subclause of IEC 62841-1 is not mentioned in this document, that subclause applies as far as reasonable. Where this document states "addition", "modification" or "replacement", the relevant text in IEC 62841-1 is to be adapted accordingly.

The following print types are used:

- requirements: in roman type;
- test specifications: *in italic type*;
- terms defined in Clause 3: **in bold type**;
- notes: in small roman type.

Subclauses, notes, tables and figures which are additional to those in IEC 62841-1 are numbered starting from 101.

Subclauses, notes, tables and figures in Annex K and Annex L which are additional to those in the main body of this document are numbered starting from 301.

A list of all parts in the IEC 62841 series, published 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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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.

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

Part 3-8: Particular requirements for transportable single spindle vertical moulders

1 Scope

IEC 62841-1:2014, Clause 1 is applicable, except as follows:

Addition:

This document applies to transportable **single spindle vertical moulders**, with a maximum **tool holder** diameter of 200 mm, designed to cut wood and analogue materials also covered with plastic laminate or edgings by hand-feed operation.

NOTE 101 **Single spindle vertical moulders** other than transportable are covered by ISO 19085-6:2024.

2 Normative references

IEC 62841-1:2014, Clause 2 is applicable, except as follows:

Addition:

IEC 62841-1:2014, *Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety – Part 1: General requirements*

<https://standards.iteh.ai/catalog/standards/iec/1a119335-e4bc-4536-a71f-a86b885b9e40/iec-62841-3-8-2024>

ISO 286-2:2010, *Geometrical product specifications (GPS) – ISO code system for tolerances on linear sizes – Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

3 Terms and definitions

IEC 62841-1:2014, Clause 3 is applicable, except as follows:

Addition:

3.101

anti-kickback device

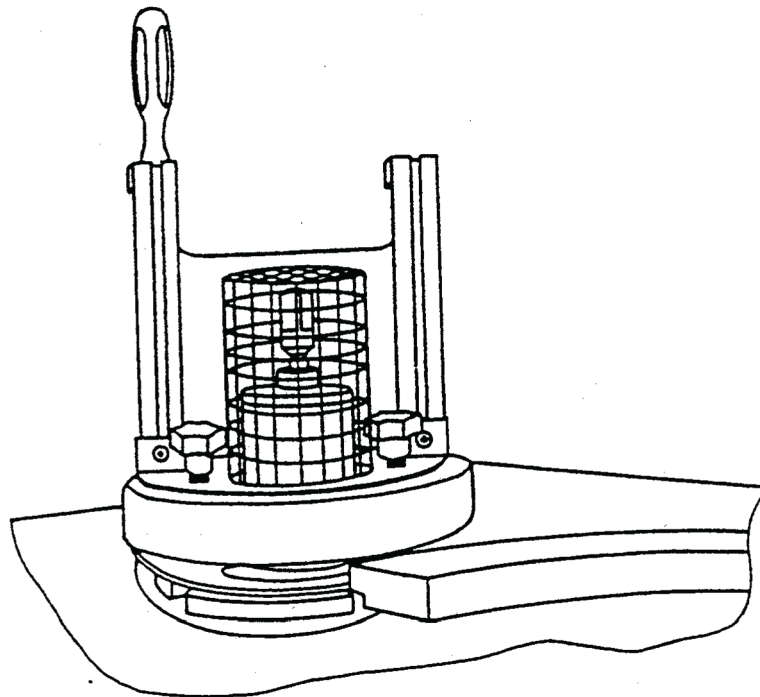
device which either reduces the possibility of **kickback** or arrests the motion during **kickback** of the workpiece, parts of it or part of the tool

3.102

curved work

machining of a curve on a workpiece by having one side in contact with the table (or if held in a jig in contact with the table) and the other in contact with the vertical reference of a steady or ring guide when using a jig

Note 101 to entry: See Figure 101.



IEC

Figure 101 – Example of curved work

3.103

cutter block

rotating assembly consisting of the **tool holder** and the cutting tool

3.104

kickback

unexpected movement of the workpiece, parts of it or part of the tool opposite to the direction of feed during processing

3.105

removable spindle

spindle capable of being changed without removing the bearings

3.106

single spindle vertical moulder

hand-fed tool with a cutting accessory on a rotating spindle used on a table or similar support which is intended to carry out work in a stationary position, capable of being lifted by hand by one person and having

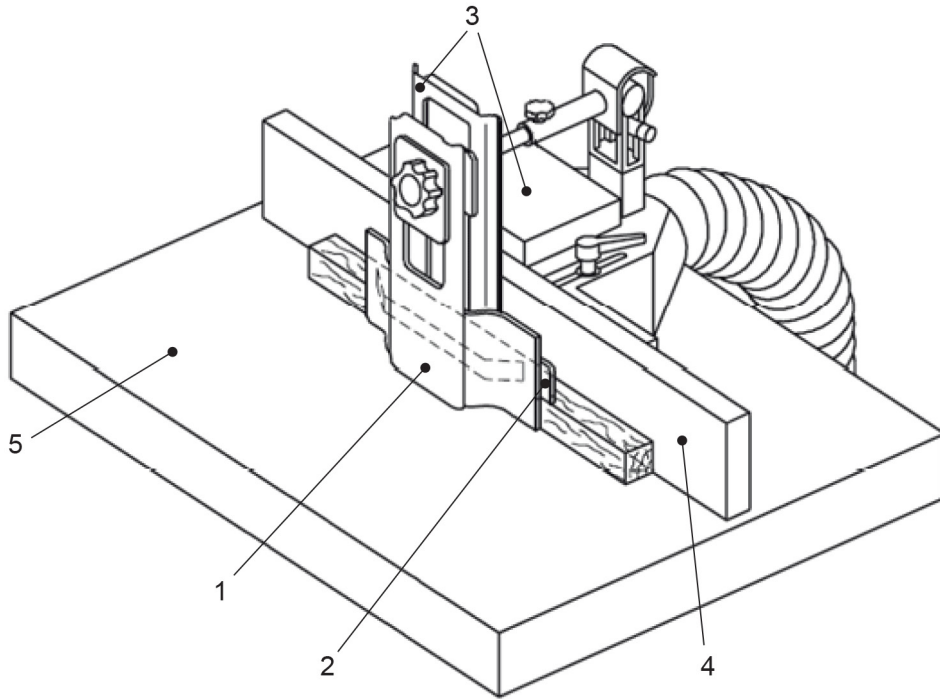
- a single spindle (fixed or removable) whose position is fixed during machining;
- a horizontal table; and
- a motor that is integral to the tool.

Note 101 to entry: The tool can have any of the following additional features:

- a) the facility for the spindle to be raised and lowered through the table;
- b) the facility for fitting an additional manually operated sliding table;
- c) the facility to tilt the spindle.

Note 102 to entry: **Single spindle vertical moulders** are also known as shapers.

Note 103 to entry: See Figure 102.



IEC

Key

- 1 table
- 2 pressure pads
- 3 guard
- 4 guard
- 5 parallel fence

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Figure 102 – Example of single spindle vertical moulder

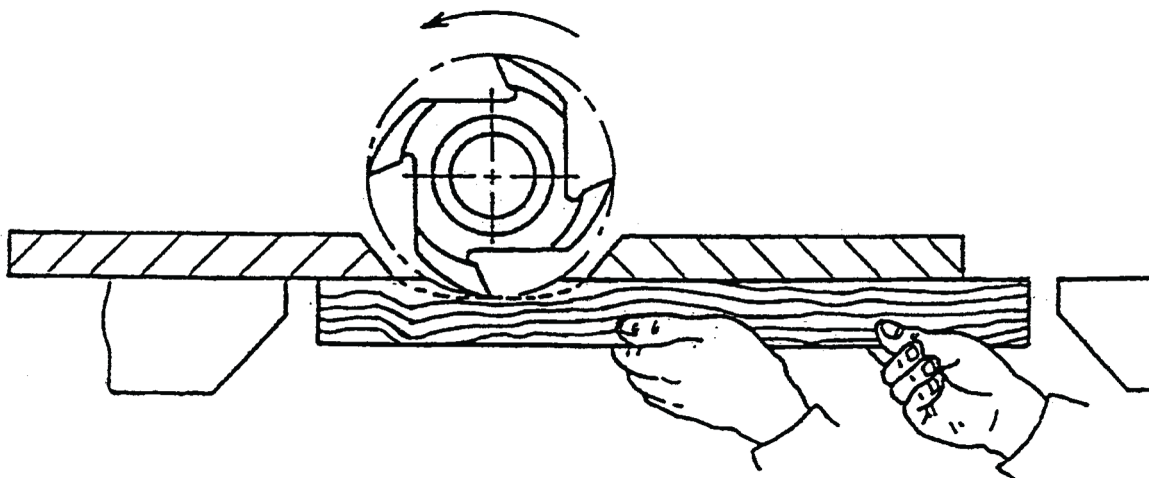
<https://standards.itih.ai/catalog/standards/iec/1a119335-e4bc-4536-a71f-a86b885b9e40/iec-62841-3-8-2024>

3.107

stopped straight work

machining of only a part of the workpiece length

Note 101 to entry: See Figure 103.



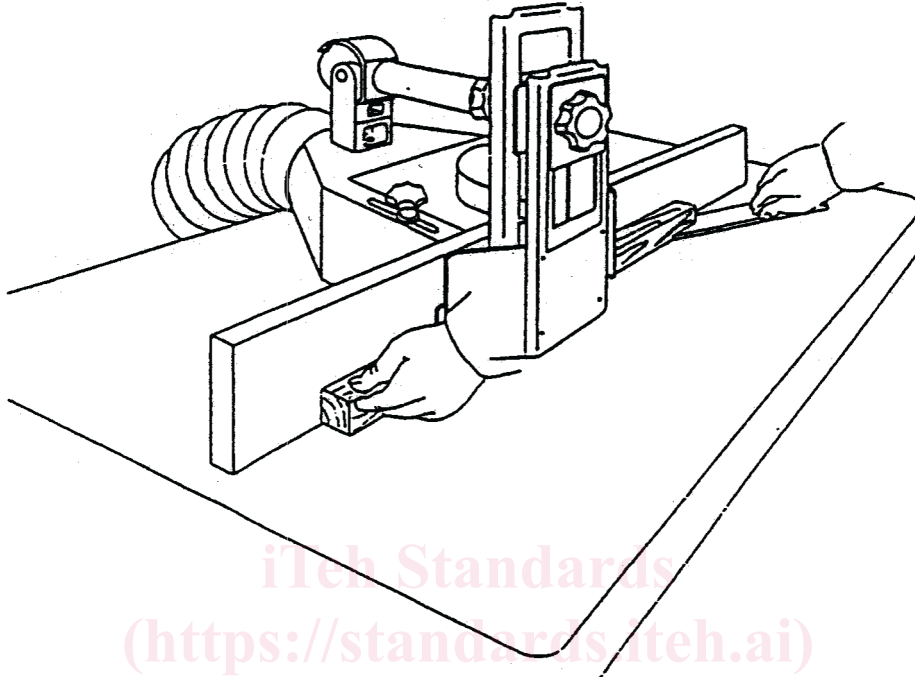
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Figure 103 – Example of stopped straight work

**3.108
straight work**

shaping of a workpiece with one face in contact with the table and a second with the fence, and where the work starts at one end of the workpiece and continues through to the other end

Note 101 to entry: See Figure 104.



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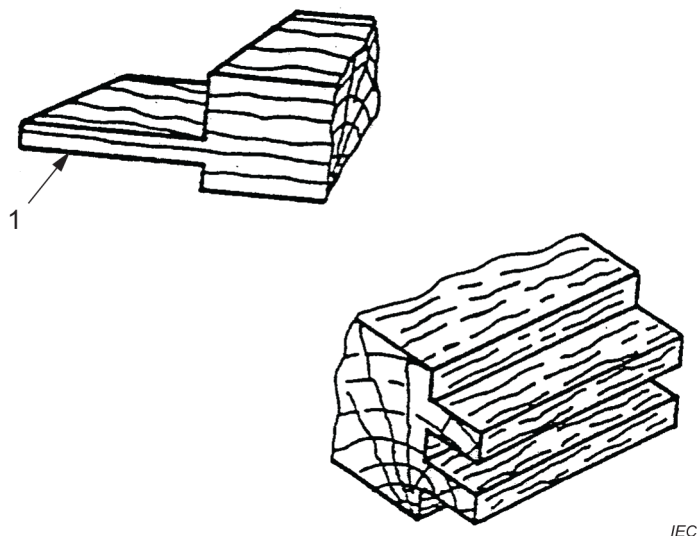
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Figure 104 – Example of straight work

3.109**tenoning**

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machining of projections and slots on the end of a workpiece to facilitate the joining of workpieces, including profiled tenons

Note 101 to entry: See Figure 105.



Key

1 tenon

Figure 105 – Examples of tenoning

3.110

tool holder

single piece spindle or **removable spindle** to which the cutting tool is fixed

4 General requirements

IEC 62841-1:2014, Clause 4 is applicable.

5 General conditions for the tests

IEC 62841-1:2014, Clause 5 is applicable, except as follows:

5.17 Addition:

*The mass of the tool includes the **tool holder** and the fences.*

6 Radiation, toxicity and similar hazards

IEC 62841-1:2014, Clause 6 is applicable.

7 Classification

IEC 62841-1:2014, Clause 7 is applicable.

8 Marking and instructions

IEC 62841-1:2014, Clause 8 is applicable, except as follows:

8.1 Addition:

Tools shall also be marked with:

- the maximum and minimum no-load speed of the **tool holder**; and
- the maximum diameter of the cutting tool to be used.

8.3 Addition:

Tools shall also be marked with an indication of the direction of rotation of the **cutter block**.

The direction of rotation of the spindle shall be indicated on a fixed part of the tool in the vicinity of the spindle axis by an arrow raised or sunk which is visible when changing the **cutter block**, or by any other means not less visible and indelible.

In addition, for tools designed to operate at more than one spindle speed, tools shall also be marked as follows:

- for tools where the speed change is achieved by changing the position of the drive belts on the drive pulley, the selected speed shall be indicated on the same side of the tool as the start control by a diagram showing the relevant speed selected for each combination of pulleys; or
- for tools where the speed change is achieved by an electrical control circuit, the selected speed shall be indicated on the same side of tool as the switching device (e.g. a variable speed control dial provided with numbers).

8.14.2 a) Addition:

- <https://standards.iteh.ai/> <https://iec-62841-3-8-2024>
- 101) Instruction to check the **cutter block** for faultless condition before use;
 - 102) Instruction to use the correct table rings in relation to the size of **cutter block**;
 - 103) Instruction to always wear suitable personal protective equipment. This includes:
 - hearing protection to reduce the risk of induced hearing loss;
 - respiratory protection to reduce the risk of inhalation of harmful dust;
 - safety gloves when handling the **cutter block** and rough material due to sharp edges; and
 - safety glasses to avoid eye injury caused by flying particles;
 - 104) When cutting wood, a warning that wood dust can cause health risks;
 - 105) Instruction how to correctly fit the dust collection system and for the correct assembly of a dust-collecting device;
 - 106) Information of the factors that influence exposure of dust, e.g. the type of material being machined and the importance of local extraction (capture or source) and proper adjustment of hoods, baffles or chutes;
 - 107) A warning not to use non-recommended cutting tools, which can lead to injuries due to the loss of control.

8.14.2 b) Addition:

- 101) Information on possible contact of the **cutter block** with hands and fingers of the operator. Instruction defining the correct **guard** and how to adjust **guard(s)** to prevent accessibility to portions of the cutter tool not being used;
- 102) Information on possible **kickback**, a sudden reaction to uncontrolled guiding of small workpieces. Instruction to use additional measures such as horizontal pressure devices when working narrow workpieces to ensure safe working;
- 103) Information on the hazardous situation due to uncontrolled lift up of the workpiece. Instruction to support adequately large workpieces to be held in place;
- 104) When performing curved work, instruction to guide the workpiece in the correct way to prevent cutting injuries. Instruction on what type of **guard** shall be used to ensure safe operation;
- 105) A warning that the incorrect use of cutter tools, workpiece and guiding devices can lead to dangerous situation. Instruction how the operator shall be trained in the handling of the workpiece, use, adjustment and operation of workpiece clamps and guiding devices and tool selection;
- 106) A warning about possible contact with moving parts. Instruction to switch off the tool and pull the plug when changing or adjusting;
- 107) A warning about incorrect adjustment of fences. Instruction how the fences shall be adjusted in relation to the different work. Instruction when and how to use a false fence to minimize the gap between the cutting tool and the fence plate;
- 108) A warning about a possible mistake of the cutting tool position. Instruction to fit the cutting tool to the tool correctly and to feed the workpiece against the direction of spindle rotation;
- 109) A warning on the necessity to select the correct speed on the tool. Instruction on how to select the right speed on the tool corresponding to the cutting tool and material being used;
- 110) Instruction to keep hands away during **straight work**. Instruction to use, where possible, pressure pads in conjunction with the fence;
- 111) A warning that missing stops can cause **kickback**. Instruction to use a stop(s) fixed to the fence when doing **stopped straight work**;
- 112) A warning that failure to use a tenoning slide or **guard** provided by the manufacturer for tenoning can lead to cutting injuries due to loss of control.

8.14.2 c) Addition:

- 101) Information on which faults on the tool, including **guards** or the **cutter block**, shall be rectified as soon as they are discovered;
- 102) A warning that unmaintained tools can cause uncontrolled situations. Instruction to use cutting tools which are sharpened, maintained and adjusted in accordance with the tool manufacturer's instructions.

9 Protection against access to live parts

IEC 62841-1:2014, Clause 9 is applicable.

10 Starting

IEC 62841-1:2014, Clause 10 is applicable.

11 Input and current

IEC 62841-1:2014, Clause 11 is applicable.