

BS EN 60745-2-17:2010



BSI Standards Publication

Hand-held motor-operated electric tools — Safety

Part 2-17: Particular requirements for routers and trimmers

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National foreword

This British Standard is the UK implementation of EN 60745-2-17:2010. It was derived by CENELEC from IEC 60745-2-17:2010. It supersedes BS EN 60745-2-17:2003, which will be withdrawn on 1 September 2013.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags **[C]** **[C]**.

The UK participation in its preparation was entrusted to Technical Committee CPL/116, Portable motor-operated tools.

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

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ISBN 978 0 580 60329 7

ICS 25.140.20

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2011.

Amendments/corrigenda issued since publication

Date	Text affected
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English version

**Hand-held motor-operated electric tools -
Safety -
Part 2-17: Particular requirements for routers and trimmers
(IEC 60745-2-17:2010, modified)**

Outils électroportatifs à moteur -
Sécurité -
Partie 2-17: Règles particulières
pour les défonceuses et les affleureuses
(CEI 60745-2-17:2010, modifiée)

Handgeführte motorbetriebene
Elektrowerkzeuge -
Sicherheit -
Teil 2-17: Besondere Anforderungen
für Oberfräsen und Kantenfräsen
(IEC 60745-2-17:2010, modifiziert)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC

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

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Ref. No. EN 60745-2-17:2010 E

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Foreword

The text of document 116/38/FDIS, future edition 3 of IEC 60745-2-17, prepared by TC 116, Safety of hand-held motor-operated electric tools, was submitted to the IEC-CENELEC parallel vote.

A draft amendment, prepared by the Technical Committee CENELEC TC 116, Safety of motor-operated electric tools, was submitted to the formal vote.

The combined texts were approved by CENELEC as EN 60745-2-17 on 2010-09-01.

This European Standard supersedes EN 60745-2-17:2003 + A11:2007.

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

The following dates were fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2011-09-01
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2013-09-01

This European 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 draft European Standard has been prepared under Mandate M/396 given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 2006/42/EC. See Annex ZZ.

Compliance with the relevant 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.

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 2-17 is to be used in conjunction with EN 60745-1:2009. 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; additional annexes are lettered AA, BB, etc.

Subclauses, tables and figures which are additional to those in IEC 60745-2-17:2010 (116/38/FDIS) are prefixed "Z".

Annex ZZ has been added by CENELEC.

NOTE In this standard the following print types are used:

- requirements proper: in roman type
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

Endorsement notice

The text of the International Standard IEC 60745-2-17:2010 was approved by CENELEC as a European Standard with agreed common modifications as given below.

Foreword to amendment A1

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The following dates were fixed:

- | | | |
|---|-------|------------|
| – latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2011-09-01 |
| – latest date by which the national standards conflicting with the amendment have to be withdrawn | (dow) | 2013-09-01 |

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CONTENTS

1	Scope	7
2	Normative references	7
3	Terms and definitions	7
4	General requirements	7
5	General conditions for the tests	7
6	Void	7
7	Classification	8
8	Marking and instructions	9
9	Protection against access to live parts	9
10	Starting	9
11	Input and current	9
12	Heating	9
13	Leakage current	9
14	Moisture resistance	10
15	Electric strength	10
16	Overload protection of transformers and associated circuits	10
17	Endurance	10
18	Abnormal operation	10
19	Mechanical hazards	10
20	Mechanical strength	11
21	Construction	11
22	Internal wiring	11
23	Components	11
24	Supply connection and external flexible cords	11
25	Terminals for external conductors	11
26	Provision for earthing	11
27	Screws and connections	12
28	Creepage distances, clearances and distances through insulation	12
29	Resistance to heat, fire and tracking	12
30	Resistance to rusting	12
31	Radiation, toxicity and similar hazards	12
	Annexes	15
	Annex K (normative) Battery tools and battery packs	15
	Annex L (normative) Battery tools and battery packs provided with mains connection or non-isolated sources	15
	Annex M (normative) Safety of working stands for operation with hand-held motor- operated electric tools	16
	Annex ZZ (informative) Coverage of Essential Requirements of Directive 2006/42/EC	33
	Bibliography	34

Figure 101 – Measurement of distance between handle and cutter	13
Figure Z101 - Position of transducers	14
Figure M.301 – Working stand with installed hand-held router.....	26
Figure M.302 – Dimensions of table	26
Figure M.303 – Dimension of table rings	27
Figure M.304 – Fence	27
Figure M.305 – Examples of guides suitable for curved work	28
Figure M.306 – Test probe	29
Figure M.307 – Definition of fence pressure device deflection measuring point and directions of application of test forces	29
Figure M.308 – Definition of fence pressure device deflection measuring point and directions of application of test forces (vertical view)	30
Figure M.309 – Definition of table pressure device deflection measuring point and directions of application of test forces (horizontal view)	30
Figure M.310 – Definition of the adjustable guard deflection measuring points and directions of application of test forces	31
Figure M.311 – Definition of guiding steady deflection measuring points and directions of application of test forces	32
Figure M.312 – Definition of the adjustment of the fence plates in the direction perpendicular to the plane of the fence	32
Table Z101 – Test conditions	8
Table M.301 – Fences and table pressure device displacement	24
Table M.302 – Adjustable guard deflection	24
Table M.303 – Guiding steady deflection	25

HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS – SAFETY –

Part 2-17: Particular requirements for routers and trimmers

1 Scope

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

Addition:

This standard applies to routers and trimmers.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

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

Additional definitions:

3.101

router

tool designed to be fitted with rotary cutter and with a base that allows control of cutting slots into or shaping the edge of various materials

3.102

trimmer

tool designed to be fitted with rotary cutter and a base that allows for control of trimming the edge of laminate sheet or similar materials

4 General requirements

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable.

6 Environmental requirements

This clause of Part 1 is applicable except as follows:

6.1.2.4 *Modification:*

Routers and trimmers are suspended. The base plate of the tool shall be horizontal. 

6.1.2.5 Modification:

Routers and trimmers are tested at no-load.

6.2 Vibration

6.2.4.2 Location of the measurement

Addition:

Figure Z101 shows the positions at both handles.

6.2.6.3 Operating conditions

Modification:

Trimmers are tested at no-load.

Routers are tested under load observing the conditions shown in Table Z101.

Table Z101 – Test conditions

Orientation	Cutting grooves in a horizontal piece of medium density fibreboard (MDF) having the minimum dimensions 800 mm (length) x 400 mm (width) x 30 mm (depth). The board is fixed on a bench by screws, clamps, air cylinders or the like with a resilient material between bench and workpiece
Tool bit	Ø 12 mm straight sided bit as specified for MDF
Feed force	As necessary for smoothly working without overloading the machine. Apply equal force to both handles avoiding excessive gripping forces
Test cycle	Cutting a 10 mm deep groove across the 400 mm width of the MDF. Distance between grooves to be 10 mm using the guide fence if supplied

6.2.7.2 Declaration of the vibration total value

Addition:

The vibration total value a_h of the handle with the highest emission and the uncertainty K shall be declared. **CE**

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:

- rated no-load speed in revolutions per minute.

8.12.1.1 Addition:

- **Hold power tool by insulated gripping surfaces, because the cutter may contact its own cord.** *Cutting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.*
- **Use clamps or another practical way to secure and support the workpiece to a stable platform.** *Holding the work by your hand or against the body leaves it unstable and may lead to loss of control.*

8.12.2 a) Addition:

- 7) Details of the type of cutters for which the tool is designed
- 8) Draw attention to the necessity for using bits of the correct shank diameter suitable for the speed of the tool
- 9) Information concerning the diameter of shank for which the collet is designed

⌚ Z101) for routers: information on the correct use of the dust collection system

Z102) for routers: advice to wear a dust mask ⌚

9 Protection against access to live parts

This clause of Part 1 is applicable.

10 Starting

This clause of Part 1 is applicable.

11 Input and current

This clause of Part 1 is applicable.

12 Heating

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

12.4 Replacement:

The tool is operated for 15 cycles, each cycle comprising a period of continuous operation of 1 min and a rest period of 1 min with the tool switched off. During the periods of operation, the tool is loaded by means of a brake adjusted so as to attain rated input or rated current. The temperature rises are measured at the end of the 15th "on" period, or at the manufacturer's option, the tool may be operated continuously until thermal stabilisation.

13 Leakage current

This clause of Part 1 is applicable.

14 Moisture resistance

This clause of Part 1 is applicable.

15 Electric strength

This clause of Part 1 is applicable.

16 Overload protection of transformers and associated circuits

This clause of Part 1 is applicable.

17 Endurance

This clause of Part 1 is applicable.

18 Abnormal operation

This clause of Part 1 is applicable.

19 Mechanical hazards

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

19.1 *Replacement:*

Routers shall be equipped with a base plate which surrounds the cutter in the plane of the plate so as to prevent inadvertent contact with the cutter during normal operation.

Compliance is checked by inspection.

Additional subclauses:

19.4.101 At least two handles are required if the mass exceeds 2 kg.

The handles shall be so shaped or located as to minimise the risk of inadvertent contact of the user's hand with rotating parts. Inadvertent contact of the user's hand is, for example, considered to be sufficiently prevented if the gripping area of the handle is provided with a suitable shroud(s) or barrier at its end(s) adjacent to the body of the tool, or the distance from a defined measuring point on the handle surface to the cutter is a minimum of 120 mm.

Compliance is checked by inspection and measurement. The measurement shall be carried out as a chain distance (see Figure 101).

With the base plate set to maximum depth of cut, to establish the measuring point on the auxiliary handle, follow the outlined procedure below.

- a) *Establish the closest (A) and the most distant (B) points from the plane of the base plate on the handle. Equidistant between points (A) and (B), draw the horizontal intersecting line on the plane parallel with the base plate and the surface of the handle.*
- b) *The point on the intersecting line of the handle surface with the largest radial distance from the centreline of the spindle is the defined measuring point.*