



**SLOVENSKI STANDARD**  
**SIST EN 60745-2-12:2004/A1:2009**  
**01-julij-2009**

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Hand-held motor-operated electric tools - Safety -- Part 2-12: Particular requirements for concrete vibrators

Handgeführte motorbetriebene Elektrowerkzeuge - Sicherheit -- Teil 2-12: Besondere Anforderungen für Innenrüttler

Outils électroportatifs à moteur - Sécurité -- Partie 2-12: Règles particulières pour les vibreurs à béton

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**Ta slovenski standard je istoveten z: EN 60745-2-12:2003/A1:2009**

**ICS:**

25.140.20      Ò\^ dã } æ!|[ åæ      Electric tools

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60745-2-12/A1**

April 2009

ICS 25.140.20

English version

**Hand-held motor-operated electric tools -  
Safety -  
Part 2-12: Particular requirements for concrete vibrators  
(IEC 60745-2-12:2003/A1:2008)**

Outils électroportatifs à moteur -  
Sécurité -  
Partie 2-12: Règles particulières  
pour les vibreurs à béton  
(CEI 60745-2-12:2003/A1:2008)

Handgeführte motorbetriebene  
Elektrowerkzeuge -  
Sicherheit -  
Teil 2-12: Besondere Anforderungen  
für Innenrüttler  
(IEC 60745-2-12:2003/A1:2008)

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This amendment A1 modifies the European Standard EN 60745-2-12:2003; it was approved by CENELEC on 2009-04-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Central Secretariat: avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 61F/737/FDIS future amendment 1 to IEC 60745-2-12:2003, prepared by SC 61F (transformed into TC 116, Safety of hand-held motor-operated electric tools), was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60745-2-12:2003 on 2009-04-01.

With this amendment, this Part 2 is established on the basis of EN 60745-1:2006.

Main changes include editorial modifications to match with EN 60745-1:2006 and clarifications in Annex K.

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) 2010-01-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2012-04-01

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## Endorsement notice

The text of amendment 1:2008 to the International Standard IEC 60745-2-12:2003 was approved by CENELEC as an amendment to the European Standard without any modification.

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IEC 60745-2-12

Edition 2.0 2008-05

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

AMENDMENT 1  
AMENDEMENT 1

Hand-held motor-operated electric tools – Safety –  
Part 2-12: Particular requirements for concrete vibrators

Outils électroportatifs à moteur – Sécurité –  
Partie 2-12: Règles particulières pour les vibreurs à béton

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

**F**

## FOREWORD

This amendment 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.

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

FDIS	Report on voting
61F/737/FDIS	61F/757/RVD

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

With this amendment, this Part 2 is established on the basis of the fourth edition (2006) of IEC 60745-1, *Hand-held motor-operated electric tools – Safety – Part 1: General requirements*.

Main changes include editorial modifications to match with the fourth edition of IEC 60745-1 and clarifications in Annex K.

The committee has decided that the contents of this amendment and the base 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, [SIST EN 60745-2-12:2004/A1:2009](https://standards.iteh.ai/catalog/standards/sist/e6c77baa-dbb4-43ca-b1c1-f175af13d8d5/sist-en-60745-2-12-2004-a1-2009)
- withdrawn, <https://standards.iteh.ai/catalog/standards/sist/e6c77baa-dbb4-43ca-b1c1-f175af13d8d5/sist-en-60745-2-12-2004-a1-2009>
- replaced by a revised edition, or
- amended.

## 1 Scope

*Replace the existing text of Clause 1 by the following:*

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

*Addition:*

This standard applies to concrete vibrators.

## 3 Definitions

*Change the title of Clause 3 to read:*

## 3 Terms and definitions

*Replace the existing text of 3.101 by the following:*

**3.101****concrete vibrator**

tool intended for compacting concrete. The active part (vibrator bottle) of the vibrator performs low-amplitude vibrations and is immersed into the mass of concrete to be vibrated. Concrete vibrators may be of one of the following designs:

- a) the motor and the vibrating mechanism are inside the vibrator bottle to which the part containing the mains switch or a power converter and switch handle assembly is connected by means of a long flexible hose containing the interconnecting cable. The long flexible hose may be used as the handle (see Figure 101);
- b) only the vibrator mechanism is inside the vibrator bottle to which a separate portable unit, comprising the motor, the handle and the mains switch, is connected by means of a long flexible hose containing a flexible shaft (see Figure 102)

**14 Moisture resistance**

*Replace the existing text of 14.1 by the following:*

**14.1 Replacement of the first paragraph:**

For design a) as defined in 3.101, the enclosure of all parts and the cable entry shall be IPX7.

*During the relevant test of this subclause, the part containing the switch or the power converter and switch handle assembly is placed in the normal position of use, the hose, if any, being attached correctly to it.*

For design b) as defined in 3.101, the motor unit shall be IPX4.

*During the relevant test of this subclause, the motor unit is placed in the most unfavourable position occurring during normal use.*

The isolating transformer or the motor-generator shall be IPX4.

**18 Abnormal operation**

*Replace the existing text of 18.12 by the following:*

**18.12** This subclause is not applicable.

*Replace the last paragraph of 18.101 by the following:*

*After the concrete vibrator has been allowed to cool down to approximately room temperature, it shall withstand an electric strength test as specified in 15.2. For concrete vibrators having the motor in the bottle, the test voltage across basic insulation is, however, reduced to 1 000 V for tools other than those of class III.*

**20 Mechanical strength**

*Add the following new subclause:*

**20.5** This subclause is not applicable.

*Replace the last paragraph of 20.101 by the following:*

Moreover, the concrete vibrator shall withstand an electric strength test as specified in 15.2. For concrete vibrators having the motor in the bottle, the test voltage across basic insulation is, however, reduced to 1 000 V for tools other than those of class III.

## 21 Construction

Add the following new subclause:

**21.32** This subclause is not applicable.

## 24 Supply connection and external flexible cords

Replace the existing text of 24.4 by the following:

### 24.4 Modification:

Instead of the first paragraph, the following applies:

Supply cords shall be at least heavy polychloroprene sheathed flexible cable (60245 IEC 66).

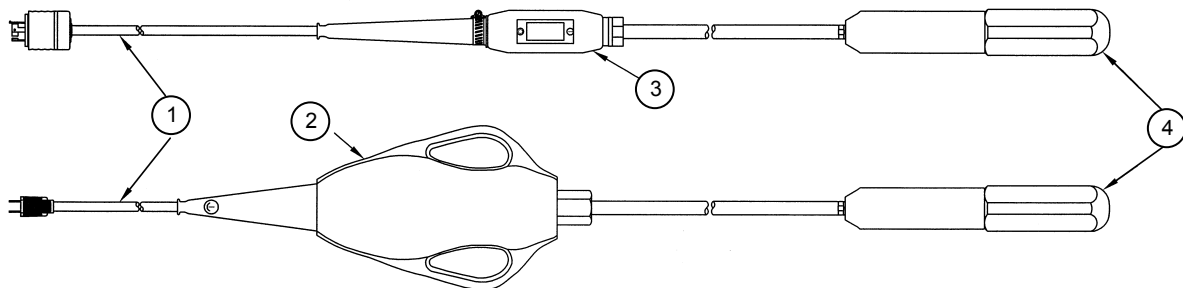
Replace the existing text of 24.101 by the following:

**24.101** The supply cable attached to the part containing the mains switch shall have a length:

- of at least 5 m for designs a) as defined in 3.101;
- of not more than 0,5 m or of at least 5 m for design b) as defined in 3.101.

Compliance is checked by measuring the length of the cable, including any cord guard, between the plug and the point where the cable enters the part containing the mains switch.

Add the following figures:



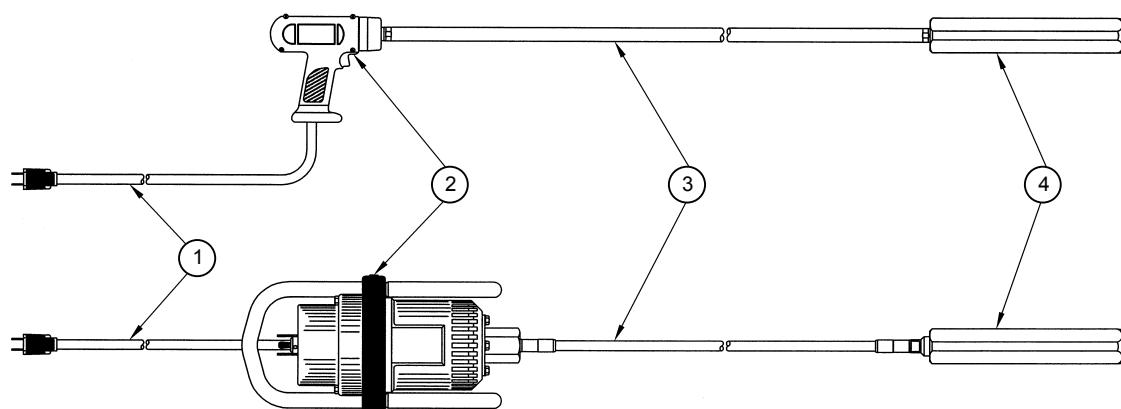
IEC 739/08

### Key

- 1 electric supply cable
- 2 power converter and switch with handle
- 3 part containing the mains switch
- 4 vibrator bottle with motor

**Figure 101 – Typical design a) of a concrete vibrator**





IEC 740/08

**Key**

- 1 electric supply cable
- 2 motor unit with switch
- 3 flexible shaft
- 4 vibrator bottle

**Figure 102 – Typical design b) of a concrete vibrator  
(standards.iteh.ai)**

**Annexes**

SIST EN 60745-2-12:2004/A1:2009

<https://standards.iteh.ai/catalog/standards/sist/e6c77baa-dbb4-43ca-b1c1-1175a1f5a6d5/sist-en-60745-2-12-2004-a1-2009>  
Replace the existing texts of Annexes K and L by the following:

**Annex K  
(normative)**

**Battery tools and battery packs**

**K.1 Addition:**

All clauses of this Part 2 apply unless otherwise specified in this annex.

**K.10.1** This subclause of Part 2 is not applicable.

**K.12.4** This subclause of Part 2 is not applicable.

**K.14.1** This subclause of Part 2 is not applicable.

**K.17.2** This subclause of Part 2 is not applicable.

**K.18.101** This subclause of Part 2 is not applicable.

**K.20.3** This subclause of Part 2 is not applicable.

**K.20.101** This subclause of Part 2 is not applicable.

**K.21.16** This subclause of Part 2 is not applicable.