

CENELEC/TC or SC TC 116	Secretariat Germany	Date 2023-09-13
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**TC title: SAFETY OF MOTOR-OPERATED ELECTRIC TOOLS**

**A Background**

CLC/TC 116 was established in 2009 as successor of the previous subcommittee CLC/SC 61F. The scope of this new Technical Committee is "To prepare European safety and environmental aspects standards for hand-held and transportable motor-operated electric tools and lawn and garden machinery".

At the moment, CLC/TC 116 is responsible for several series of standards as summarized below:

- EN 60745 with safety requirements for hand-held tools. Currently, a Part 1 with general requirements and 10 parts 2 (including amendments) with specific requirements are still published.  
The EN 60745 series is being replaced by the EN 62841 series, see below.
- EN 61029-1 with safety requirements for transportable tools. Currently a Part 1 with general requirements and 4 parts 2 (including amendments) with specific requirements are still published.  
The EN 61029 series is being replaced by the EN 62841 series, see below.
- Nine published standards with specific requirements for lawn and garden machinery based on EN 60335-1. These standards are being replaced by the EN 62841 series, see below.
- EN 50632 with test codes for the dust emission of power tools. Currently a Part 1 with general requirements, 10 parts 2 with specific requirements for hand-held tools and 3 parts 3 with specific requirements for transportable tools are published.
- EN IEC 62841 with safety requirements for all kinds of power tools and lawn and garden machinery. Currently a Part 1 with general requirements, 13 parts 2 with specific requirements for hand-held tools and 11 parts 3 with specific requirements for transportable tools and 5 parts 4 with specific requirements for lawn and garden machinery are published. Further parts are planned.

As far as the safety standards are concerned, the work in CLC/TC 116 and its working groups reflects the work to be carried out in IEC/TC 116. CLC/TC 116 considers the IEC documents in relation to the Machinery Directive and prepares Common Modifications. CLC/TC 116 has focused on the alignment of requirements with respect to Machinery Directive 2006/42/EC, such as vibration test codes, safety and noise aspects. These European documents are listed as harmonised standards in the Official Journal of the European Union under the Machinery Directive.

In addition, CLC/TC 116 plans to prepare standards for the environmental aspects of electric motor-operated electric tools and lawn and garden machinery. The first standard will cover the reparability of the products concerned.

**B Business Environment**

## **B.1 General**

**External:** The work of TC 116 continues to be highly relevant and very important to stakeholders, due to the increased desire for harmonised product safety standards and the on-going interest in product certification. This harmonisation is becoming increasingly important in a global economy.

The work is strongly influenced by the regulation activities of the EU Commission.

Safety standards are vital for the electric tool industry in order to manage the risk associated with these products while keeping pace with new technologies.

There is an increasing awareness for environmental issues linked to industry products, such as durability, re-use, repairability.

**Internal:** TC 116 aims to produce and maintain European standards relating to the safety and environmental aspects of electric tools in a manner that is timely, efficient and which keeps pace with modern technology. The standards produced will satisfy the needs of certification bodies, consumers, manufacturers and national authorities. The requirements are written with the goals of minimising risks to an acceptable level as well as facilitating international trade in electric tools by minimising the need for national differences in countries that adopt the standards.

## **B.2 Market demand**

The stakeholders for TC 116 standards include consumers, manufacturers of electric tools, certification and testing laboratories, retailers and national (local) market surveillance authorities. These groups, except for retailers, are actively represented on the committee. At present, there is no difficulty to attain active stakeholder participation.

The electric tool industry is well established and the coverage of the current standards produced by TC 116 is sufficient for most products. However, advances in battery technology have fuelled the growth in cordless products relative to the traditional mains-operated products. Accordingly, much of the recent standards' development has been related to the safety aspects of these cordless products.

## **B.3 Trends in technology**

The use of electronic circuits (including programmable elements) to provide a safety related function will increasingly impact the design and construction of electric tools in the future.

Advances in battery technology allow increased energy storage per unit volume and will influence product designs in the future.

## **B.4 Market trends**

The standards produced by TC 116 are used to show compliance with the specific legal requirements promulgated to govern safety of electrical equipment. Consequently, ensuring the relevance of TC 116 standards continues to be of prime importance. Use of TC 116 standards reduces the effort for manufacturers for the risk analysis relating to product safety since such an analysis is covered by the safety requirements in the TC 116 standards.

## B.5 Ecological environment

Requirements covering the impact of electric tools on the ecological environment are partly within the scope of TC 116. To a certain extent, safety requirements are written so as to take into account the industry's need to use environmentally friendly materials. Environmental-friendly design of electric tools will be covered by separate standards covering various aspects. Other environmental aspects relating to electric tools are within the scope of other CENELEC and IEC committees such as SC 77A, CISPR/F, TC 106 and TC 111.

## B.6 Involvement of societal stakeholders

TC 116 is in direct contact with manufacturer associations, consumer associations and certification bodies so as to guarantee the high applicability of the standards issued.

TC 116 has a liaison with ANEC (European Association for the Co-ordination of Consumer Representation in Standardisation).

## B.7 Involvement of SMEs

Standardisation can facilitate knowledge transfer, particularly to SMEs. The existence of TC 116 enables them to contribute to the standardisation work directly.

## C System approach aspects

In accordance with the IEC/CENELEC system approach to standardisation, TC 116 is a customer committee of the following IEC component committees.

TC20	Electric cables
SC 21A	Secondary cells and batteries containing alkaline or other non-acid electrolytes
SC 23B	Plugs, socket-outlets and switches
SC 23C	World-wide plug and socket-outlet systems
SC 23E	Circuit-breakers and similar equipment for household use
SC 23F	Connecting devices
SC 23G	Appliance couplers
SC 23H	Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles
SC 23J	Switches for appliances
SC 32C	Miniature fuses
TC 33	Power capacitors and their applications
SC 34B	Lamp caps and holders
TC 40	Capacitors and resistors for electronic equipment
SC 47E	Discrete semiconductor devices
TC 72	Automatic electrical controls
TC 96	Transformers, reactors, power supply units, and combinations thereof

In order to ensure the safety of products designed and manufactured to TC 116 standards, all components used in electric tools must be such that they do not compromise the ability of the product to meet the requirements of the relevant standard when incorporated as specified by the manufacturer.

## **D Objectives and strategies (3 to 5 years)**

The objectives of TC 116 are as follows:

1. Maintain and develop standards necessary for manufacturers of electric tools, the safety of users of these products, national authorities responsible for product safety and bodies responsible for certifying product safety.
2. Maintain and develop standards that define and specify the environmental impact of electric tools.
3. Engage with component committees identified under the system approach aspect to ensure that component standard safety requirements are compatible with the safety requirements in the product standards prepared by TC 116.
4. Continue to identify new technical areas requiring attention and assign projects to existing working groups or establish new working groups as appropriate.

## **E Action plan**

### Actions related to objective D-1

- Develop further parts 2, 3 and 4 with particular requirements that will replace all older existing TC 116 safety standards. The general numbering scheme is as follows:
  - EN IEC 62841-2-XX: Particular requirements for hand-held tools
  - EN IEC 62841-3-XX: Particular requirements for transportable tools
  - EN IEC 62841-4-XX: Particular requirements for lawn and garden machinery
- Revise the existing Part 1 of EN 62841.
- Revise all parts of EN IEC 62841 as needed to comply with the new Machinery Regulation ((EU) 2023/1230).
- Identify new product types requiring new standard development.
- Encourage participation in TC 116 from new member countries that express an interest in TC 116 activities.

### Actions related to objective D-2

- Develop standards which cover various environmental issues of electric tools, starting with repairability.
- Continuously consider the necessity to specify other environmental aspects.

### Actions related to objective D-3

- Review all TC 116 liaisons at each plenary meeting and identify potential new liaisons as appropriate.
- Review other activities in IEC/CENELEC and ISO/CEN and consider the impact on TC 116. Determine where TC 116 input/expertise will be needed.
- Continue to develop guidance for addressing functional safety using electronic circuits, including those with programmable elements.

- Review component committee standards and drafts for change. Comment on the drafts when necessary to ensure their compatibility with TC 116 safety requirements.

#### Actions related to objective D-4

- Continuously consider market trends and impacts and identify areas for improvement and/or development.
- Encourage National Committees to provide input on a continuous basis.

#### **F Useful links to CENELEC website**

The CLC/TC 116 dashboard provides access to the following information:

- Scope
- Working Groups
- Work Programme
- Publications

[https://standards.cencenelec.eu/dyn/www/f?p=305:110:0:::FSP\\_PROJECT,FSP\\_LANG\\_ID:72580,25&cs=17DEE0EDC26AC97F107F8F2D593443BB9](https://standards.cencenelec.eu/dyn/www/f?p=305:110:0:::FSP_PROJECT,FSP_LANG_ID:72580,25&cs=17DEE0EDC26AC97F107F8F2D593443BB9)

The CLC/TC 116 section in Projex-Online provides further information such as:

- Officers
- Status of projects

<https://projex.cencenelec.eu/PgWorkItemDetails.aspx?PAGE=WI&WI=63529&VIEW=TB&TB=3135>

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