



SLOVENSKI STANDARD

SIST EN 50570:2014

01-januar-2014

Gospodinski in podobni električni aparati - Varnost - Posebne zahteve za komercialne električne sušilnike perila

Household and similar electrical appliances - Safety - Particular requirements for commercial electric tumble dryers

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Besondere Anforderungen für elektrische Trommeltrockner für den gewerblichen Gebrauch

Appareils électrodomestiques et analogues - Sécurité - Règles particulières pour les sèche-linge à tambour à usage collectif

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ICS:

97.060

Aparati za nego perila

Laundry appliances

SIST EN 50570:2014

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50570

November 2013

ICS 97.060

English version

**Household and similar electrical appliances -
Safety -
Particular requirements for commercial electric tumble dryers**

Appareils électrodomestiques et
analogues -
Sécurité -
Règles particulières pour les sèche-linge à
tambour à usage collectif

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Hausgebrauch und ähnliche Zwecke -
Besondere Anforderungen für elektrische
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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

This document (EN 50570:2013) has been prepared by CLC/TC 61, "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2014-06-10
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2016-06-10
this document have to be withdrawn

EN 50570:2013 is to be read in conjunction with EN 60335-1:2012 and its amendments, which is referred to in this text as "Part 1". This standard supplements or modifies the corresponding clauses of Part 1 as indicated in the text.

NOTE The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

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.

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Introduction

This European Standard has been prepared to provide a means of conforming to essential safety requirements of the Machinery Directive 2006/42/EC. Other requirements and other EU Directives may be applicable to the machines within the scope of this standard.

This standard is a product family standard dealing with the safety of commercial electric **tumble dryers** and takes precedence over horizontal and generic standards covering the same subject.

This standard recognises the level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of commercial electric **tumble dryers** when operated as in normal use taking into account the manufacturer's instructions. It also covers any reasonably foreseeable misuse of the machinery and takes into account the way in which electromagnetic phenomena can affect the safe operation of commercial electric **tumble dryers**.

A commercial electric **tumble dryer** that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

This standard takes into account the requirements of HD 60364-1 as far as possible so that there is compatibility with the wiring rules when the machinery is connected to the supply mains. However, national wiring rules may differ.

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1 Scope

Replace this clause of Part 1 by the following:

This European Standard deals with the safety of electrical operated **tumble dryers** intended to be used by trained users in i.e. hotels, hospitals, factories, in light industry and on farms. It also covers **tumble dryers** which are declared for commercial use **in public areas** and operated by lay persons e.g. in laundrettes, communal laundry rooms. The rated voltage shall not be more than 250 V for single phase and 480 V for others.

This standard also deals with the safety of **tumble dryers** that use a refrigerating system, incorporating sealed motor-compressors, for drying textile material. These machines may use **flammable refrigerants**. Additional requirements for these machines are given in Annex BB.

This standard also covers **tumble dryers** making use of other energy sources. It does not cover requirements for these other energy sources. However the influence of these other energy sources on the machines is covered.

This standard deals with the common hazards presented by **tumble dryers** that are encountered by all persons. However, in general, it does not take into account:

- a) persons (including children) whose:
 - 1) physical, sensory or mental capabilities, or
 - 2) lack of experience and knowledge
 prevents them from using the **tumble dryers** safely without supervision or instruction;

- b) children playing with the **tumble dryer**.

Attention is drawn to the fact that:

- for commercial electric **tumble dryers** intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
- in many countries, additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities, the national authorities responsible for transportation and the national authorities for buildings.

This European Standard does not apply to:

- c) industrial laundry machinery (EN ISO 10472-4),
- d) **tumble dryers** intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

For the purpose of this standard, the term “appliance” as used in Part 1 is to be read as “**tumble dryers** intended for commercial use”.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

EN 60204-1:2006/A1:2009, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2005/A1:2008)*

EN 60335-1:2012, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1:2010, modified)*

EN 60704-1:2010, *Household and similar electrical appliances — Test code for the determination of airborne acoustical noise — Part 1: General requirements (IEC 60704-1:2010)*

EN 60730-2-12:2006, *Automatic electrical controls for household and similar use — Part 2-12: Particular requirements for electrically operated door locks (IEC 60730-2-12:2005, modified)*

EN ISO 3744, *Acoustics — Determination of sound power levels and sound energy levels of noise sources*

using sound pressure — *Engineering methods for an essentially free field over a reflecting plane (ISO 3744)*

EN ISO 3746, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746)*

EN ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871)*

EN ISO 9614-2:1996, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning (ISO 9614-2:1996)*

EN ISO 11201, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO 11201)*

EN ISO 11203, *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 (ISO 11203)*

EN ISO 11688-1, *Acoustics — Recommended practice for the design of low-noise machinery and equipment — Part 1: Planning (ISO/TR 11688-1)*

Replace the reference to EN 62233 by:

EN 62233:2008, *Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure (IEC 62233:2005, modified)*

3 Terms and definitions

This clause of Part 1 is applicable except as follows:

3.1.9 normal operation

Addition:

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The appliance is filled with textile material having a mass in the dry condition equal to the maximum load stated in the instructions.

The textile material consists of pre-washed double-hemmed cotton sheets having dimensions approximately 70 cm × 70 cm and a specific mass between 140 g/m² and 175 g/m² in the dry condition. The textile material is soaked with water having a temperature of 25 °C ± 5 °C and a mass equal to that of the textile material.

If the drying function can automatically follow the washing function in a washing machine, the appliance is not separately loaded. The appliance is operated with the maximum quantity of textile material stated in the instructions for the combined washing-drying cycle.

Cotton having a water content not exceeding 10 % is considered to be in the dry condition.

Cotton conditioned for 24 h in still air, having a temperature of 20 °C ± 2 °C, a relative humidity between 60 % and 70 % and a pressure between 860 mbar and 1 060 mbar, will contain approximately 7 % water.

Addition:

3.1.101 tumble dryer

appliance in which textile material is dried by tumbling in a rotating drum through which heated air is blown

3.1.102 condensation-type tumble dryer

appliance in which the air used for the drying process is dehumidified by cooling

3.1.103 guard

part of the appliance specifically designed to provide protection by means of a physical barrier

3.1.104 operator

person or persons installing, operating, adjusting, maintaining, cleaning, repairing or moving appliances

3.1.105 workstation

place, as defined in the instructions of the relevant appliance, where the **operator** has to be in attendance to operate, or to adjust, or to control the appliance

Note 1 to entry: Example is the location where the **operator** loads the appliance.

3.1.106 public areas

area in which the general public including children can enter

Note 1 to entry: Examples are laundrettes, communal laundry rooms.

3.1.107 cool down period

final part of the **tumble dryer** cycle where the drum is continuously rotated with reduced power to the heating element and with air circulation in order to reduce the possibility of spontaneous combustion of the clothes load

Note 1 to entry: Continuous rotation does not mean rotation in same direction if the intended operation is to reverse direction in normal use.

4 General requirement

This clause of Part 1 is applicable except as follows:

Replace the first paragraph with the following:

Appliances shall be constructed so that in normal use they function safely so as to cause no danger to persons or surroundings during normal use, even in the event of carelessness, and during installation, adjusting, maintenance, cleaning, repairing or transportation.

5 General conditions for the tests

This clause of Part 1 is applicable.

6 Classification

This clause of Part 1 is applicable except as follows:

6.2 Addition:

Appliances shall be at least IPX4.

7 Marking and instructions

This clause of Part 1 is applicable except as follows:

7.1 Addition:

Appliances shall be marked in addition with:

- business name, and full address of the manufacturer and, where applicable, his authorised representative,
 - model or type reference, serial number if any and production year,
- NOTE 101 Production year is the year when the production process is completed. The production year can be a part of the serial number.
- designation of the appliance,

NOTE 102 The designation may be a combination of letters and/or numbers and shall enable to identify the appliance as specified in the instructions.

- the water supply pressure or range of pressures, in kilopascals (kPa), for machines intended to be connected to a water supply, unless this is indicated in the instruction sheet,
- the maximum permissible steam supply pressure, in kilopascals (kPa), unless this is indicated in the instruction sheet,
- the maximum permissible water and steam supply temperatures in degrees Celsius, unless this is indicated in the instruction sheet.

The appliance shall be marked with symbol ISO 7000-0790 (2004-01) or with the substance of the following:

Read the instructions

When the provisions of footnote ^d to Table 101 apply, the appliance shall be marked with

- the substance of "CAUTION: Hot surface", or
- symbol IEC 60417-5041(2002-10).

The warning label shall be put on the surface of the appliance having the highest temperature and shall be visible during operation.

7.6 Addition:



[symbol IEC 60417-5041 (2002-10)]

caution, hot surface

7.10 Addition:

If the **off position** is only indicated by letters, the word "off" shall be used.

7.12

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Add the following text before the second paragraph:

The front cover of the instructions shall include the substance of the following warning:

CAUTION: Read the instructions before using the appliance.

This wording may be replaced by symbols ISO 7000-0434 and ISO 7000-0790.

Replace the first sentence in the requirement of Part 1 with the following

Instructions shall be provided with the appliance so that the appliance can be used safely.

Addition:

If symbols IEC 60417-5041 (2002-10), ISO 7000-0434 and ISO 7000-0790 are used on the appliance or in the instructions, their meaning shall be explained.

The instructions shall contain at least the following information:

- business name and full address of the manufacturer and, where applicable, his authorised representative;
- model or type reference of the appliance as marked on the appliance itself, except for the serial number;
- designation of the appliance together with its explanation in case it is given by a combination of letters and/or numbers; the designation shall enable the identification of the appliance as specified in the instructions;
- general description of the appliance, when needed due to the complexity of the appliance;
- specific precautions if required during installation, operation, adjusting, user maintenance, cleaning, repairing or moving;
- when needed drawings, diagrams, descriptions and explanations necessary for the safe use and user maintenance of the appliance.

- maximum mass of dry textile material in kilograms to be used in the appliance;
- that appliance is not be used if industrial chemicals have been used for cleaning;
- that the lint trap has to be cleaned frequently, if applicable;
- that lint shall not to be allowed to accumulate around the appliance (not applicable for appliances intended to be vented to the exterior of the building);
- that adequate ventilation has to be provided to avoid the back flow of gases into the room from appliances burning other fuels, including open fires.

NOTE 101 This instruction is not required if the appliance discharges the air into the room.

- possible reasonably foreseeable misuse and, whenever relevant, a warning against the effects it may have on the safe use of the appliance

The instructions shall include the substance of the following:

- do not dry unwashed items in the appliance;
- items that have been soiled with substances such as cooking oil, acetone, alcohol, petrol, kerosene, spot removers, turpentine, waxes and wax removers should be washed in hot water with an extra amount of detergent before being dried in the appliance;
- items such as foam rubber (latex foam), shower caps, waterproof textiles, rubber backed articles and clothes or pillows fitted with foam rubber pads should not be dried in the appliance;
- fabric softeners, or similar products, should be used as specified by the fabric softener instructions;
- the final part of the drying cycle occurs without heat (cool down cycle) to ensure that the items are left at a temperature that ensures that the items will not be damaged;
- remove all objects from pockets such as lighters and matches.

The instructions shall include the substance of the following warning:

WARNING: Never stop the appliance before the end of the drying cycle unless all items are quickly removed and spread out so that the heat is dissipated.

The manufactures shall declare if the appliance is also intended to be used in **public areas**. If the appliance is not suitable for use in **public areas** the instruction shall include the substance of the following warning:

CAUTION This appliance shall not be installed where the public has access.

The words 'Original instructions' shall appear on the language version(s) verified by the manufacturer or by the authorised representative.

When a translation of the original instructions has been provided by a person introducing the appliance on the market; the meaning of the sentence 'Translation of the original instructions' has to appear in the relevant instructions delivered with the appliance.

The instructions needed for maintenance/service to be done by specialised personnel, mandated by the manufacturer or the authorised representative, and may be supplied in only one Community language which the specialised personnel understand.

The instructions shall indicate the type and frequency of inspections and maintenance required for safe operation including the preventive maintenance measures.

7.12.1 Addition:

The installation instructions shall state

- for appliances with ventilation openings in the base, that a carpet or similar shall not obstruct the openings,
- that exhaust air shall not be discharged into a flue which is used for exhausting fumes from appliances burning gas or other fuels,

NOTE 101 This instruction is not required if the appliance discharges the air into the room.

- that the appliance shall not be installed behind a lockable door, a sliding door or a door with a hinge on the opposite side to that of the appliance, in such a way that a full opening of the appliance door is restricted.