SLOVENSKI STANDARD
SIST EN 61121:2013/A12:2025

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Gospodinjski sušilni stroji - Metode za merjenje učinkovitost delovanja - Dopolnilo A12

Tumble dryers for household use - Methods for measuring the performance

Wäschetrockner für den Hausgebrauch - Verfahren zur Messung der Gebrauchseigenschaften

Sèche-linge à tambour à usage domestique - Méthodes de mesure de l'aptitude à la fonction

Ta slovenski standard je istoveten z: **EN 61121:2013/A12:2025**

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97.060	Aparati za nego perila	Laundry appliances

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English Version

Tumble dryers for household use - Methods for measuring the performance

Sèche-linge à tambour à usage domestique - Méthodes de mesure de l'aptitude à la fonction

Wäschetrockner für den Hausgebrauch - Verfahren zur Messung der Gebrauchseigenschaften

This amendment A12 modifies the European Standard EN 61121:2013; it was approved by CENELEC on 2025-01-20. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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European foreword

This document (EN 61121:2013/A12:2025) has been prepared by CLC/TC 59X “Performance of household and similar electrical appliances”.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2026-02-28
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2026-02-28

This document supersedes the amendment EN 61121:2013/A11:2019 and corrigenda (if any).

This document is read in conjunction with EN 61121:2013.

EN 61121:2013/A12:2025 includes the following significant technical changes with respect to EN 61121:2013:

a) the **programme** to be tested for the **combined test series** is the new introduced **eco programme**;

b) the maximum time of the phase without pre-conditioning of the **tumble dryer** between two **test runs** is extended to 96 h;

c) the requirement to adjust the water used to the pH-value is omitted;

d) a loading procedure for the **tumble dryer** is introduced;

e) addition of an alternative ambient air climate for **conditioning** the **test load**;

f) the validity of a **test run** and the validity of a **test series** has been revised;

g) the method to pre-age **test load** items for creation of a new **test load** is modified;

h) the method to calculate a pooled standard deviation has been deleted;

i) a calculation method for the average final moisture content has been added;

j) specific weighting factors are introduced for the calculation of the weighted average value of the **combined test series**;

k) Annex ZB Tolerances and control procedures is deleted and replaced by a new Annex ZB which defines the testing procedure for **multi-drum tumble dryers**;

l) the procedure to measure low power modes is modified (see Annex ZD).

Annex ZA sets out the procedure to be applied for testing in accordance with Commission Regulations with regard to energy labelling and ecodesign and provides all necessary links to all relevant clauses of this European Standard.

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

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annexes ZZA and ZZB, which are an integral part of this document.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

1 Modifications to Clause 2, “Normative references”

Add *the following reference:*

EN IEC 63474:2023, *Electrical and electronic household and office equipment - Measurement of networked standby power consumption of edge equipment (IEC 63474:2023)*

Replace *the reference to EN 60704-2-6 with its dated reference:*

EN 60704-2-6:2012[1], *Household and similar electrical appliances - Test code for the determination of airborne acoustical noise – Part 2-6: Particular requirements for tumble dryers (IEC 60704-2-6:2012)*

Delete *the following references:*

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

EN 60704-3, *Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 3: Procedure for determining and verifying declared noise emission values (IEC 60704-3)*

2 Modifications to Clause 3, “Terms and definitions”

Add *the following table before 3.1.1:*

“

Table Z1 — Reference table for terms and definitions in alphabetical order

Terms and definition	subclause
air vented tumble dryer	3.1.2
automatic tumble dryer	3.1.4
combined cycle time	3.1.Z27
combined energy consumption	3.1.Z28
combined programme time	3.1.Z26
combined rated capacity	3.1.Z25
condensation efficiency	3.1.Z20
condenser tumble dryer	3.1.3
conditioning	3.1.8
cycle	3.1.15
cycle time	3.1.16
delay start	3.1.Z15
eco programme	3.1.Z18
end of the programme	3.1.13
Energy Efficiency Index	3.1.Z19
final moisture content	3.1.23
frequency of cleaning	3.1.Z12
full load	3.1.Z1
initial moisture content	3.1.22
left on mode duration	3.1.Z10

[1] As amended by EN 60704-2-6:2012/A11:2025.

Terms and definition	subclause
moisture content	3.1.21
multi-drum tumble dryer	3.1.Z21
multi-drum mode	3.1.Z22
network	3.1.Z14
networked standby mode	3.1.Z17
nominal test load mass	3.1.20
non-automatic tumble dryer	3.1.5
normalization	3.1.17
off mode	3.1.24
operation	3.1.11
partial load	3.1.Z2
post programme phase LO	3.1.Z9
post programme phase LU	3.1.Z8
post programme phases	3.1.Z7
power management system	3.1.Z11
pre-treatment	3.1.7
programme	3.1.12
programme time	3.1.14
rated capacity	3.1.18
rated voltage	3.1.26
simultaneous cycle	3.1.Z24
simultaneous programme	3.1.Z23
standby mode	3.1.Z13
test load	3.1.6
test load mass	3.1.19
test run	3.1.9
test series	3.1.10
treatment	3.1.Z3
treatment full	3.1.Z4
treatment half	3.1.Z5
tumble dryer	3.1.1
unstable left on mode	3.1.Z6
wrinkle guard function	3.1.Z16

“

Replace *term entry 3.1.18 with the following:*

“

3.1.18

rated capacity

maximum mass in kilograms, declared by the manufacturer, importer or authorized representative at 0,5 kg intervals of dry textiles of a particular type, which can be treated in one drying **cycle** of a **tumble dryer** on the selected **programme**, when loaded in accordance with the manufacturer's instructions

"

Replace *term entry 3.1.24 with the following:*

"

3.1.24

off mode

condition in which the test **tumble dryer** is connected to the mains and is not providing any function

Note Z1 to entry: The following is also considered as **off mode**:

a) conditions providing only an indication of **off mode**;

b) conditions providing only functionalities intended to ensure electromagnetic compatibility

"

Delete *term entry 3.1.25.*

Replace *term entry 3.1.Z2 with the following:*

"

3.1.Z2

partial load

half of the **rated capacity** of a **tumble dryer** for a given **programme**

Note Z1 to entry: See Annex ZA for additional requirements.

"

Replace *term entries 3.1.Z4 and 3.1.Z5 with the following:*

"

3.1.Z4

treatment full

test run using the **eco programme** with **full load**

3.1.Z5

treatment half

test run using the **eco programme** with **partial load**

"

Add *the following term entries:*

"

3.1.Z13

standby mode

condition where the test **tumble dryer** is connected to the mains and provides only the following functions, which can persist for an indefinite time:

a) reactivation function, or reactivation function and a mere indication of enabled reactivation function; and/or

b) reactivation function through a connection to a **network**; and/or

c) information or status display; and/or

d) detection function for emergency measures.

3.1.Z14

network

communication infrastructure with topology of links, an architecture, including the physical components, organizational principles, communication procedures and formats (protocols)

3.1.Z15

delay start

condition where the user has selected a specified delay to the beginning of the **cycle** of the selected **programme**

3.1.Z16

wrinkle guard function

operation of the test **tumble dryer** after completion of a **programme** to prevent excessive wrinkle building of the laundry

3.1.Z17

networked standby mode

mode in which the **tumble dryer** is able to activate another function by way of a remotely initiated trigger from a **network** connection

3.1.Z18

eco programme

programme declared by the manufacturer, importer or authorized representative as to be able to dry cotton laundry with an **initial moisture content** of the load of 60 % down to a final moisture content of the load of 0 %

3.1.Z19

Energy Efficiency Index

ratio of the weighted energy consumption to the standard drying **cycle** energy consumption of a specific **tumble dryer** model

3.1.Z20

condensation efficiency

ratio between the mass of moisture condensed by a **condenser tumble dryer** and the mass of moisture removed from the load at the end of a **cycle**

3.1.Z21

multi-drum tumble dryer

tumble dryer **equipped with more than one drum whether in separate units or in the same casing**

3.1.Z22

multi-drum mode

programme where some or all of the drums of a multi-drum tumble dryer are operated simultaneously

Note Z1 to entry: A **tumble dryer** with more than one drum for the **treatment** of the textiles, where drums cannot be operated simultaneously is not regarded as having a **multi-drum mode**. In this case each drum shall be tested separately.

3.1.Z23

simultaneous programme

series of **operations** which are predefined within the **multi-drum tumble dryer** and which are declared by the manufacturer as suitable for drying certain textile types in two or more drums at the same time

3.1.Z24

simultaneous cycle

complete drying process, started at the same time for two or more drums, as defined by the **simultaneous programme** selected, consisting of a series of **operations** (tumbling, heating, cool down, etc.) and including any **operations** that occur after the completion of the **simultaneous programme**

Note Z1 to entry: Examples of **operations** that can occur after the completion of the **programme** are monitoring and anticreasing (where applicable).

3.1.Z25

combined rated capacity

sum of **rated capacities** of all drums suitable for running a **simultaneous programme**

3.1.Z26

combined programme time

time from the simultaneous initiation of the **programme** for two or more drums (excluding any user programmed delay) until the end of the **simultaneous programme**.

Note Z1 to entry: If the end of **programme** is not indicated, the **combined programme time** is equal to the **combined cycle time**.

3.1.Z27

combined cycle time

time from the simultaneous initiation of the **programme** for two or more drums (excluding any user programmed delay) until all activity ceases

Note Z1 to entry: Activity is considered to have ceased when the power consumption reverts to a steady-state condition that persists indefinitely without user intervention; if there is no activity after the end of the **programme**, the **combined cycle time** is equal to the **combined programme time**.

Note Z2 to entry: **Cycle time** includes any activity that can occur after the **programme** is completed. This could include any electronic activity or any additional mechanical activity that occurs for a limited period after any end of programme indicator. Any cyclic event that occurs indefinitely is considered to be steady-state.

3.1.Z28

combined energy consumption

sum of the electrical energy consumption for all drums over a **simultaneous programme**

“

In 3.2 ***replace*** *Table Z1 with the following:*

“

Table Z2 — Symbols relating to Annex ZA

Symbol	Symbol in IEC 61121:2012	Units	Definition	Clause (first appearance)
$\lfloor\ \rceil$	-		rounding up/down to full integer values (no decimal places) as described in EN ISO 80000-1	ZA.2
$\lfloor\ \rfloor$	-		always rounding up to full integer values (no decimal places)	ZA.2

Symbol	Symbol in IEC 61121:2012	Units	Definition	Clause (first appearance)
$\lceil \quad \rceil$	-		always rounding down to full integer values (no decimal places)	ZA.2
c	W	kg	**Rated capacity** to calculate the Standard Annual Energy Consumption of **tumble dryer**.	ZA.5.9
CI	-		Two sided confidence interval per **treatment**	ZA.2
EEI	-		Energy Efficiency Index of a tumble dryer	ZA.5.9
$\overline{E_{dry}}$	-	kWh	Average energy consumption for **treatment full**	ZA.5.6
$\overline{E_{dry1/2}}$	-	kWh	Average energy consumption for **treatment half**	ZA.5.6
E_{tc}	-	kWh	weighted energy consumption per **cycle** for the combined **test series**	ZA.5.6
$\overline{C_{dry}}$	-	%	Condensation Efficiency for the treatment full	ZA.5.3
$\overline{C_{dry1/2}}$	-	%	Condensation Efficiency for the treatment half	ZA.5.3
C_t	-	%	weighted Condensation Efficiency Index for the combined test series	ZA.5.3
$\overline{L_{dry}}$	-	l	Average value for the total water consumption for the **treatment full**	ZA.5.4
$\overline{L_{dry1/2}}$	-	l	Average water consumption for **treatment half**	ZA.5.4
L_t	-	l	weighted value for the total water consumption for the combined **test series**	ZA.5.4
$W_{n,part}$	-	g	Nominal partial **test load mass**	ZA.2
n_{SH}	-		Number of sheets at rated **test load mass**	ZA.2
n_{PC}	-		Number of pillowcases at rated **test load mass**	ZA.2
n_T	-		Number of towels at rated **test load mass**	ZA.2
$n_{A,SH}$	-		Number of sheets in part A	ZA.2
$n_{A,PC}$	-		Number of pillowcases in part A	ZA.2
$n_{A,T}$	-		Number of towels in part A	ZA.2
$n_{B,SH}$	-		Number of sheets in part B	ZA.2