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Responsible committee: RHE/17 Testing of air conditioning units

Interested committees:

Title: BS EN 14825:2022/A1 Air conditioners, liquid chilling packages and heat pumps, with electrically driven compressors, for space heating and cooling, commercial and process cooling - Testing and rating at part load conditions and calculation of seasonal per

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- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

**Air conditioners, liquid chilling packages and heat pumps,
with electrically driven compressors, for space heating and
cooling, commercial and process cooling - Testing and
rating at part load conditions and calculation of seasonal
performance**

Climatiseurs, groupes refroidisseurs de liquide et pompes à chaleur avec compresseur entraîné par moteur électrique pour le chauffage et le refroidissement des locaux, le froid commercial et industriel - Essais et détermination des caractéristiques à charge partielle et calcul de performance saisonnière

Luftkonditionierer, Flüssigkeitskühlsätze und Wärmepumpen mit elektrisch angetriebenen Verdichtern zur Raumbeheizung und -kühlung, gewerblichen Kühlung und Prozesskühlung - Prüfung und Leistungsbemessung unter Teillastbedingungen und Berechnung der jahreszeitbedingten Leistungszahl

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 113.

This draft amendment A1, if approved, will modify the European Standard EN 14825:2022. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document EN 14825:2022/prA1:2023 has been prepared by Technical Committee CEN/TC 113 “Heat pumps and air conditioning units”, the secretariat of which is held by UNE.

This document is currently submitted to the CEN Enquiry.

This document will amend EN 14825:2022.

EN 14825:2022/prA1:2023 includes the following significant technical changes with respect to EN 14825:2022:

- Correction of normative references to EN 14511.

- Corrections of errors in the published edition.

- A new Annex N with a controls verification procedure (CVP) test to verify the compressor frequency at part load condition D.

- A new Annex O for indoor unit airflow rate measurement, setting and verification for air-to-air units with a rated capacity of ≤ 12 kW.

This document has been prepared under a standardization request addressed to CEN 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 ZA to ZF, which are an integral part of EN 14825:2022.

82 Introduction

83 The incoming changes in the revised Regulation (EU) 206/2012 for testing air-to-air air-conditioners and
84 heat pumps introduce the airflow limitation to make sure thermal comfort is considered, and the controls
85 verification procedure (CVP) to certify the compliance of testing of units covered by EN 14825 by market
86 surveillance.

87 The incoming changes in the revised Regulation (EU) 813/2013 for testing air to water, water (brine)-to-
88 water (brine) and DX/water (brine) introduce the controls verification procedure (CVP) to certify the
89 compliance of testing of units covered by EN 14825 by market surveillance.

90 As such, indoor unit(s) airflow measurements and CVP need to be considered and included in EN 14825.

91 This amendment considers the following:

- 92 1) Controls verification procedure (CVP) test to verify the compressor frequency,
- 93 2) Indoor unit airflow rate measurement, setting and verification for air-to-air units with a rated
94 capacity of ≤ 12 kW.

1 Modification to Clause 2, “Normative references”

Replace the normative reference to EN 14511-1 with the following:

EN 14511-1:2022, Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 1: Terms and definitions

Replace the normative reference to EN 14511-2 with the following:

EN 14511-2:2022, Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 2: Test conditions

Replace the normative reference to EN 14511-3 with the following:

EN 14511-3:2022, Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors - Part 3: Test methods

Replace the normative reference to EN 15502-1 with the following:

EN 15502-1:2021, Gas-fired heating boilers - Part 1: General requirements and tests

2 Modifications to Clause 3, “Terms and definitions”

Add the following new term entry:

“

3.1.21**controls verification procedure**

CVP

procedure intended to verify the controls settings for the compressor frequency measured during the part load condition D for space cooling and/or for space heating

Note 1 to entry The compressor frequency is expressed in Hz.”

Renumber the existing definitions from 3.1.21 onwards.

3 Modification to 3.2, “Symbols, abbreviated terms and units”

Add the following rows to Table 1:

“

<i>CVP</i>	Controls verification procedure		I, II	
$\Delta p_{e, std}$	static pressure difference for ducted units in standard air conditions as declared by the manufacturer	Pa	I	
ρ_{std}	density of standard air (20° C(dry bulb), 15 °C (wet bulb), 101 325 Pa)	kg/m ³	I	
ρ_{test}	density at the actual atmospheric conditions at the measuring point of the air flow rate	kg/m ³	I	