SLOVENSKI STANDARD
SIST EN 14825:2022/oprA1:2023

01-december-2023

Klimatske naprave, enote za hlajenje kapljevine ter toplotne črpalke za ogrevanje in hlajenje prostora z električnimi kompresorji, profesionalno in procesno hlajenje prostora - Preskušanje in ocenitev ob delni obremenitvi ter izračun letnega učinka - Dopolnilo 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 performance

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

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

Ta slovenski standard je istoveten z: **EN 14825:2022/prA1**

ICS:

23.120	Zračniki. Vetrniki. Klimatske naprave	Ventilators. Fans. Air-conditioners
27.080	Toplotne črpalke	Heat pumps
91.140.30	Prezračevalni in klimatski sistemi	Ventilation and air-conditioning systems

SIST EN 14825:2022/oprA1:2023 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
EN 14825:2022

prA1

October 2023

ICS 27.080; 91.140.30

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

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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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EUROPEAN COMMITTEE FOR STANDARDIZATION
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.

Introduction

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

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

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

This amendment considers the following:

1) Controls verification procedure (CVP) test to verify the compressor frequency,

2) Indoor unit airflow rate measurement, setting and verification for air-to-air units with a rated 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:

"

CVP	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/m³	I	
ρ_{test}	density at the actual atmospheric conditions at the measuring point of the air flow rate	kg/m³	I	

$q_{v,declared}$	air flow rate in standard air conditions as declared by the manufacturer	m^3/h	I	
$T_{cvp,start}$	CVP starting temperature	°C		
$T_{in,D}$	Inlet water temperature Part load condition D	°C		
ΔT	CVP temperature ramp pace	K/h		

“

4 Modification to 6.3, “Water(brine)-to-air-units”

Replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

5 Modification to 6.4.2, “Low temperature application”

Replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

6 Modification to 6.4.3, “Intermediate temperature application”

In Table 9, replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

7 Modification to 6.4.4, “Medium temperature application”

In Table 10, replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

8 Modification to 6.4.5, “High temperature application”

In Table 11, replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

9 Modification to 6.5.2, “Low temperature application”

In Table 12, replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

10 Modification to 6.5.3, “Intermediate temperature application”

In Table 13, replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

11 Modification to 6.5.4, “Medium temperature application”

In Table 14, replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

12 Modification to 6.5.5, “High temperature application

In Table 15, replace “EN 14511-2:2018” *with* “EN 14511-2:2022”.

13 Modification to 8.1, “General”

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022”.

14 Modification to 8.2.2.2, “Test installation and measurement”

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022”.

15 Modification to 8.2.3, “Boiler testing”

Replace “EN 15502-1:2012+A1:2015 ” *with* “EN 15502-1:2021”.

16 Modification to 8.3.2, “Test conditions and measurements”

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022”.

17 Modification to 8.3.3, “Test installation”

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022”.

Replace “EN 15502-1:2012+A1:2015 ” *with* “EN 15502-1:2021” *(two occurrences).*

18 Modification to 8.3.4.1, “Volume Flow”

Replace Formula (27) with the following:

“

$$V = \frac{V_g}{t_e} \qquad (27)$$

”

19 Modification to 11.1, “General”

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022”.

Replace reference to EN 14511-1:2018 with EN14511-1:2022

20 Modification to 11.2, “Refrigerant piping”

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022” *(three occurrences).*

21 Modification to 11.3, “Basic principles”

Replace “EN 14511-2:2018” *with* “EN 14511-2:2022” *(two occurrences).*

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022”.

Replace “4.1.4 of EN 14511-3:2018” *with* “4.1.3 of EN 14511-3:2022”.

Replace “4.1.5 of EN 14511-3:2018” *with* “4.1.4 of EN 14511-3:2022”.

22 Modification to 11.4, “Uncertainties of measurement”

In Note 1, *replace* “EN 14511-3:2018” *with* “EN 14511-3:2022”.

23 Modification to 11.5.1, “General”

Replace “EN 14511-3:2018” *with* “EN 14511-3:2022”.