



NSAI
Standards

Irish Standard
I.S. EN 13771-2:2017

Compressors and condensing units for refrigeration - Performance testing and test methods - Part 2: Condensing units

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I.S. EN 13771-2:2017

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National Foreword

I.S. EN 13771-2:2017 is the adopted Irish version of the European Document EN 13771-2:2017, Compressors and condensing units for refrigeration - Performance testing and test methods - Part 2: Condensing units

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EUROPEAN STANDARD

EN 13771-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2017

ICS 23.140; 27.200

Supersedes EN 13771-2:2007

English Version

Compressors and condensing units for refrigeration - Performance testing and test methods - Part 2: Condensing units

Compresseurs et unités de condensation pour la
réfrigération - Essais de performance et méthodes
d'essais - Partie 2 : Unités de condensation

Kältemittel-Verdichter und Verflüssigungssätze für die
Kälteanwendung - Leistungsprüfung und
Prüfverfahren - Teil 2: Verflüssigungssätze

This European Standard was approved by CEN on 26 July 2017.

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This European Standard exists 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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European foreword

This document (EN 13771-2:2017) has been prepared by Technical Committee CEN/TC 113 “Heat pumps and air conditioning units”, the secretariat of which is held by UNE.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2018, and conflicting national standards shall be withdrawn at the latest by March 2018.

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

This document supersedes EN 13771-2:2007.

The following significant changes compared to the previous edition have been incorporated in this European Standard:

- a) alignment of symbols and indexes with EN 13771-1;
- b) introduction of a new Figure 1 “Condensing unit configurations” and revision of the Figures 2 to 7;
- c) introduction of the new Clause 4 “Uncertainty of measurement and test conditions”;
- d) specification of a detailed test room and setup description to reduce testing uncertainty, aligned with EN 327 and EN 14511-3;
- e) adoption to transcritical operation and cyclic capacity control.

EN 13771 consists of the following parts, under general title *Compressors and condensing units for refrigeration — Performance testing and test methods*:

— *Part 1: Refrigerant compressors*

— *Part 2: Condensing units*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 13771-2:2017 (E)

1 Scope

This European Standard applies only to condensing units for refrigeration and describes a number of selected performance test methods. These methods provide sufficiently accurate results for the determination of the refrigerating capacity, power absorbed, refrigerant mass flow and the coefficient of performance.

This European Standard applies only to performance tests conducted at the manufacturer's works or wherever the instrumentation and load stability for testing to the accuracy required is available.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 378-1, *Refrigerating systems and heat pumps - Safety and environmental requirements - Part 1: Basic requirements, definitions, classification and selection criteria*

EN 378-2, *Refrigerating systems and heat pumps - Safety and environmental requirements - Part 2: Design, construction, testing, marking and documentation*

ISO 817, *Refrigerants — Designation and safety classification*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

refrigerating capacity

Q

(condensing unit) product of the refrigerant mass flow and the difference between the specific enthalpy of the refrigerant at the inlet of the condensing unit (Figure 1, point 11) and the specific enthalpy of the fluid at the outlet of the condensing unit (Figure 1, point 12)

Note 1 to entry: The outlet (point 12) of condensing unit depends on design (single stage or two stage or internal heat exchangers, see Figure 1 a), b), c) and d).

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