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

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13771-2:2007 sisaldab Euroopa standardi EN 13771-2:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 30.10.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13771-2:2007 consists of the English text of the European standard EN 13771-2:2007. This document is endorsed on 30.10.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This part of EN 13771 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, isentropic efficiency and the coefficient of performance.	**Scope:** This part of EN 13771 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, isentropic efficiency and the coefficient of performance.

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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'essai - 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 13 July 2007.

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Foreword

This document (EN 13771-2:2007) has been prepared by Technical Committee CEN/TC 113 “Heat pumps and air conditioning units”, the secretariat of which is held by AENOR.

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 February 2008 , and conflicting national standards shall be withdrawn at the latest by February 2008.

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.

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1 Scope

This part of EN 13771 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.

The type of measuring instrument and the allowable uncertainties within which measurements shall be made are listed in Table 2.

2 Normative references

The following referenced documents are indispensable for the application 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 378-1:2000, *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*

EN ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 1: General principles and requirements (ISO 5167-1:2003*)

ISO 817, *Refrigerants - Designation system*

ISO 5168, *Measurement of fluid flow - Procedures for the evaluation of uncertainties*

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
Φ_0
product of the refrigerant mass flow and the difference between the specific enthalpy of the refrigerant at the inlet of the condensing unit and that at the outlet of the condensing unit. The refrigerant at the unit inlet is superheated above the suction dew point temperature to the stated value. The liquid is at a pressure corresponding to the outlet of the condensing unit

3.1.2
power absorbed

3.1.2.1
power absorbed by the condensing unit where the motor is an integral part of the unit, P_{cm}
electrical power input at the compressor motor terminals plus the power to all other devices (e.g. fan motor) forming an integral part of the condensing unit