



NSAI
Standards

Irish Standard
I.S. EN 13141-7:2010

Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 7: Performance testing of a mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended

I.S. EN 13141-7:2010

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English Version

Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 7: Performance testing of a mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for single family dwellings

Ventilation des bâtiments - Essais de performance des composants/produits pour la ventilation des logements - Partie 7: Essais de performance des centrales double flux (y compris la récupération de chaleur) pour les systèmes de ventilation mécaniques prévus pour des logements individuels

Lüftung von Gebäuden - Leistungsprüfungen von Bauteilen/Produkten für die Lüftung von Wohnungen - Teil 7: Leistungsprüfung von mechanischen Zuluft- und Ablufteinheiten (einschließlich Wärmerückgewinnung) für mechanische Lüftungsanlagen in Wohneinheiten (Wohnung oder Einfamilienhaus)

This European Standard was approved by CEN on 25 September 2010.

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Foreword

This document (EN 13141-7:2010) has been prepared by Technical Committee CEN/TC 156 "Ventilation for buildings", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by May 2011, and conflicting national standards shall be withdrawn at the latest by May 2011.

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 13141-7:2004.

Compared to the 2004 version, changes have been made to the following (sub)clauses, tables and annexes:

- modification of the test temperatures to be similar to those of heat pump;
- possibility of measuring supply and exhaust ventilation and heat pump;
- suppression of reference to EN 308 for heat exchangers particular test conditions, this standard define its own conditions;
- introduction of tracer gas method for leakages;
- dependence of leakages under/over pressure configurations on fan position in airflow;
- obligation of reporting the two temperature ratios (on exhaust and supply air);
- possibility of doing an optional test by measuring on the outdoor side of the building while the measure is made on the inside side of the building in the mandatory test (exhaust and supply air flow rate);
- possibility of giving humidity ratios, like for PAC, this allowed to test enthalpy heat exchangers;
- review of value for balanced mass flows at 3 %, over 3% declaration of unbalanced unit and report of the disbalance value;
- setting of the declared maximum air volume flow at 50 Pa by default in lack of other declaration;
- addition of the declared minimum air volume flow at $P_{tud}/2$ and minimum setting;
- creation of a reference point at $P_{tud}/2$ and 70 % of declared maximum air volume flow;
- correction of the temperature ratios considering flow rate ratios.

This standard is a part of a series of standards on residential ventilation. It has a parallel standard referring to the performance characteristics of the components/products for residential ventilation.

The position of this standard in the field of standards for the mechanical building services is shown in Figure 1.

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

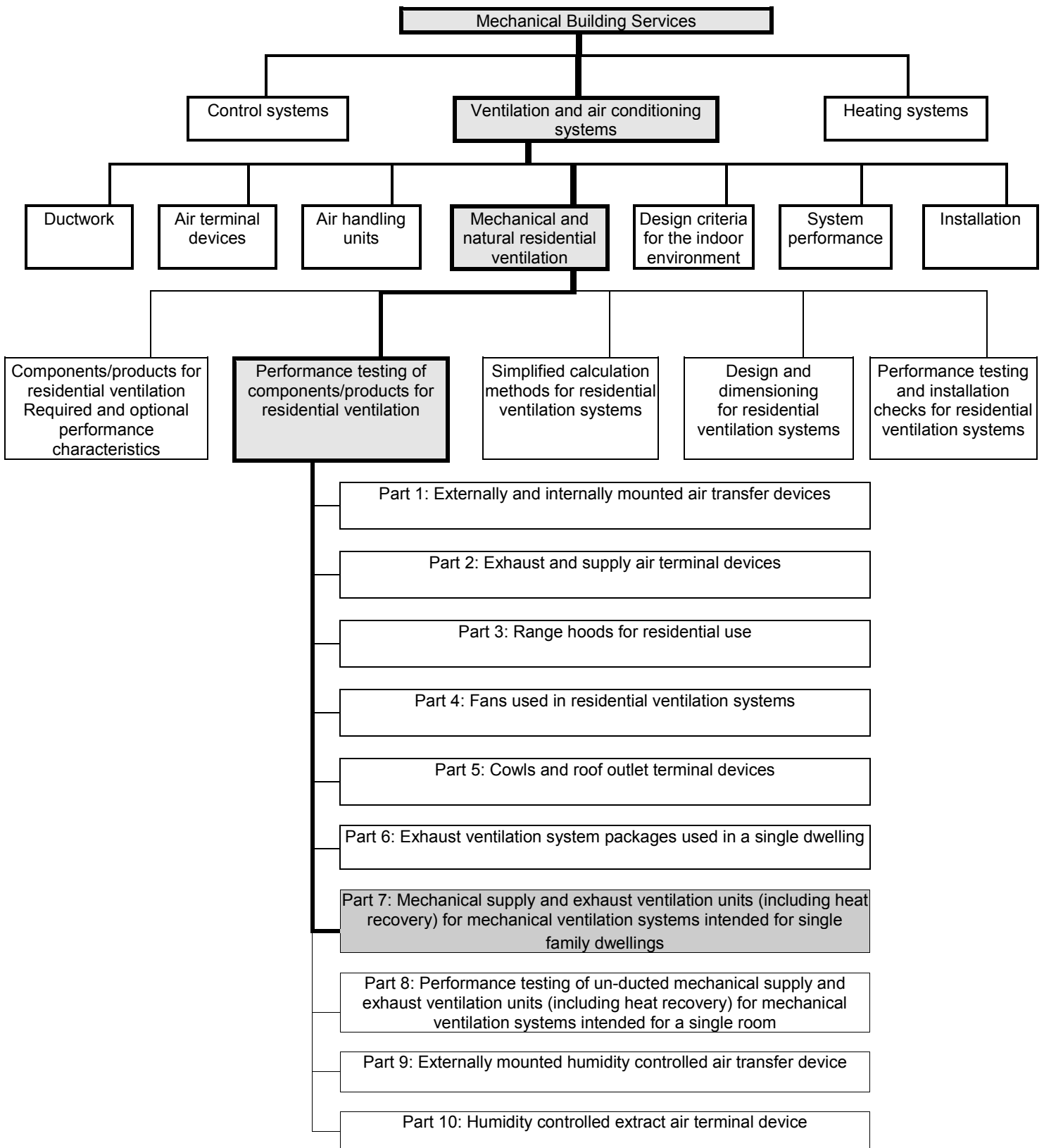


Figure 1 — Position of EN 13141-7 in the field of the mechanical building services

Introduction

This European Standard specifies methods for the performance testing of components used in residential ventilation systems to establish the performance characteristics as identified in EN 13142.

This European Standard does not contain any information on ductwork and fittings, which are covered by other European Standards.

The standard can be used for the following applications:

- laboratory testing;
- attestation purposes.

1 Scope

This part of EN 13141 specifies the laboratory test methods and test requirements for the testing of aerodynamic, thermal and acoustic performance, and the electrical performance characteristic of a mechanical supply and exhaust ventilation units used in a single dwelling.

It covers unit that contain at least, within one or more casing:

- supply and exhaust air fans;
- air filters;
- air-to-air heat exchanger and/or Extract Air-to-Outdoor Air heat pump for extract air heat recovery;
- control system.

Such unit can be provided in more than one assembly, the separate assemblies of which are designed to be used together.

The different possible arrangements of heat recovery heat exchangers and/or heat pumps are described in Annex A.

This standard does not deal with non-ducted units or reciprocating heat exchangers.

This standard does not deal with units that supply several dwellings.

This standard does not cover ventilation systems that may also provide water space heating and hot water.

This standard does not cover units including combustion engine driven compression heat pumps and absorption heat pumps.

Electrical safety requirements are given in EN 60335-2-40 and EN 60335-2-80.

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