



BSI Standards Publication

**Fan coil unit performance -  
Determination of specific fan  
power — Test method**

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## Foreword

### **Publishing information**

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 August 2020. It was prepared by Technical Committee RHE/2, *Ventilation for buildings, heating and hot water services*. A list of organizations represented on this committee can be obtained on request to its committee manager.

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### **Presentational conventions**

The provisions of this standard are presented in roman (i.e. upright) type. Its methods are expressed as a set of instructions, a description, or in sentences in which the principal auxiliary verb is “shall”.

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

### **Contractual and legal considerations**

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

## 1 Scope

This British Standard sets out a controlled method to determine specific fan power (SFP) of fan coil units (FCU) as a function of the volume flow rate of air.

This British Standard covers ducted, non-ducted and cassette FCUs that can be standing on the floor, hung on the wall, or fitted into the ceiling or floor, with the inlet and outlet air sections located either on the front, back, bottom or top of the unit.

This British Standard also defines FCU configuration for test purposes.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document<sup>1)</sup>. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS EN 1397, *Heat exchangers – Hydronic room fan coil units – Test procedures for establishing the performance*

BS EN 16798-3:2017, *Energy performance of buildings – Ventilation for buildings – Part 3: For non-residential buildings – Performance requirements for ventilation and room-conditioning systems (Modules M5-1, M5-4)*

[BS EN ISO 5801:2017](#), *Fans – Performance testing using standardized airways*

BS EN ISO 16890 (all parts), *Air filters for general ventilation*

PD CEN/TS 17153, *Ventilation for buildings – Correction of air flow rate according to ambient conditions*

## 3 Terms, definitions and symbols

For the purposes of this British Standard, the following terms, definitions and symbols apply.

### 3.1 Terms and definitions

#### 3.1.1 external static pressure

positive pressure difference measured between the air outlet and inlet sections of the unit

#### 3.1.2 fan coil unit (FCU)

##### 3.1.2.1 fan coil unit

factory-made single assembly providing one or more of the functions of forced circulation of air, heating, cooling, dehumidification and filtering of air, but which does not include the source of heating or cooling

*NOTE 1* This device includes a liquid-to-air heat exchanger, inlet filter and a fan, and can be designed for free or ducted intake air and/or free or ducted delivery of supply air.

*NOTE 2* [Annex A](#) provides a series of drawing schemes associated to designations to show typical existing configurations.

<sup>1)</sup> Documents that are referred to solely in an informative manner are listed in the Bibliography.