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**Energy performance of buildings —  
Indicators for partial EPB  
requirements related to thermal  
energy balance and fabric features —**

**Part 2:  
Explanation and justification of ISO  
52018-1**

*Performance énergétique des bâtiments — Indicateurs pour  
des exigences PEB partielles liées aux caractéristiques du bilan  
énergétique thermique et du bâti —*

*Partie 2: Explication et justification de l'ISO 52018-1*



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ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# Contents

	Page
Foreword.....	v
Introduction.....	vi
<b>1 Scope.....</b>	<b>1</b>
<b>2 Normative references.....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Symbols and subscripts.....</b>	<b>1</b>
<b>5 General aspects.....</b>	<b>2</b>
<b>6 Mix of EPB features with requirements.....</b>	<b>3</b>
<b>7 Summer thermal comfort.....</b>	<b>3</b>
7.1 Motivation.....	3
7.2 Points of attention.....	3
7.3 Indicators.....	5
7.4 Comparable economic strictness.....	5
7.5 New construction/renovation.....	6
7.6 Exceptions.....	6
<b>8 Winter thermal comfort.....</b>	<b>6</b>
<b>9 Energy need for heating, or variants.....</b>	<b>6</b>
9.1 Motivation.....	6
9.2 Indicators.....	7
9.3 Comparable economic strictness.....	8
9.4 New construction/renovation.....	9
9.5 Exceptions.....	9
<b>10 Energy need for cooling, or variants.....</b>	<b>9</b>
<b>11 Combination of “needs”.....</b>	<b>9</b>
<b>12 Overall thermal insulation of the thermal envelope.....</b>	<b>10</b>
12.1 Motivation.....	10
12.2 Indicators.....	10
12.3 Comparable economic strictness.....	10
12.4 New construction/renovation.....	11
12.5 Intermediate forms between overall and individual thermal insulation.....	11
<b>13 Thermal insulation of individual elements of the thermal envelope.....</b>	<b>11</b>
13.1 Motivation.....	11
13.2 Indicators.....	12
13.3 Points of attention.....	12
13.4 Comparable economic strictness.....	14
13.5 New construction/renovation.....	14
13.6 Exceptions.....	15
<b>14 Thermal bridges.....</b>	<b>15</b>
14.1 General.....	15
14.2 Motivation.....	15
14.3 Requirement setting.....	15
14.4 Alternative routes.....	16
14.5 New construction/renovation.....	17
14.6 Further information.....	18
<b>15 Window energy performance.....</b>	<b>18</b>
15.1 Motivation.....	18
15.2 Indicators.....	18
15.3 Points of attention.....	18

15.4	New construction/renovation.....	18
<b>16</b>	<b>Airtightness.....</b>	<b>19</b>
16.1	Motivation.....	19
16.2	Indicator and comparable economic strictness.....	19
16.3	New construction/renovation.....	20
16.4	Measurement.....	20
16.5	Further information.....	21
<b>17</b>	<b>Solar control.....</b>	<b>22</b>
<b>Annex A</b> (informative)	<b>Input and method selection data sheet — Template.....</b>	<b>23</b>
<b>Annex B</b> (informative)	<b>Input and method selection data sheet — Default choices.....</b>	<b>24</b>
<b>Annex C</b> (informative)	<b>Regional references in line with ISO Global Relevance Policy.....</b>	<b>26</b>
<b>Annex D</b> (informative)	<b>Example method for integrating fictitious cooling into the overall EPB indicators.....</b>	<b>27</b>
<b>Annex E</b> (informative)	<b>Illustration of the variable value of the heating need per useful floor area for a given set of technical measures.....</b>	<b>29</b>
<b>Annex F</b> (informative)	<b>An underpinning of an expression for the maximum mean thermal transmittance.....</b>	<b>33</b>
<b>Bibliography</b> .....		<b>37</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

ISO/TR 52018-2 was prepared by ISO technical committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 2, *Calculation methods*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 89, *Thermal performance of buildings and building components*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 52018 series can be found on the ISO website.

## Introduction

### Relation between this document and the accompanying International Standard

For proper understanding of the present document, it is necessary to read it in close conjunction, clause by clause, with ISO 52018-1. Essential information provided in Part 1 is not repeated in this part. References to a clause refer to the combined content of that clause in both parts 1 and 2. Brief articles on the subject can be found in [20], [21] and [22].

### The set of EPB standards, technical reports and supporting tools

In order to facilitate the necessary overall consistency and coherence, in terminology, approach, input/output relations and formats, for the whole set of EPB-standards, the following documents and tools are available:

- a) a document with basic principles to be followed in drafting EPB-standards: CEN/TS 16628:2014, *Energy Performance of Buildings - Basic Principles for the set of EPB standards*[1];
- b) a document with detailed technical rules to be followed in drafting EPB-standards: CEN/TS 16629:2014, *Energy Performance of Buildings - Detailed Technical Rules for the set of EPB-standards*[2];

The detailed technical rules are the basis for the following tools:

- 1) a common template for each EPB standard, including specific drafting instructions for the relevant clauses;
- 2) a common template for each technical report that accompanies an EPB standard or a cluster of EPB standards, including specific drafting instructions for the relevant clauses;
- 3) a common template for the spreadsheet that accompanies each EPB (calculation) standard, to demonstrate the correctness of the EPB calculation procedures.

Each EPB standard follows the basic principles and the detailed technical rules and relates to the overarching EPB standard, ISO 52000-1 [3].

One of the main purposes of the revision of the EPB standards has been to enable that laws and regulations directly refer to the EPB standards and make compliance with them compulsory. This requires that the set of EPB standards consists of a systematic, clear, comprehensive and unambiguous set of energy performance procedures. The number of options provided is kept as low as possible, taking into account national and regional differences in climate, culture and building tradition, policy and legal frameworks (subsidiarity principle). For each option, an informative default option is provided ([Annex B](#)).

### Rationale behind the EPB technical reports

There is a risk that the purpose and limitations of the EPB standards will be misunderstood, unless the background and context to their contents – and the thinking behind them – is explained in some detail to readers of the standards. Consequently, various types of informative contents are recorded and made available for users to properly understand, apply and nationally or regionally implement the EPB standards.

If this explanation would have been attempted in the standards themselves, the result is likely to be confusing and cumbersome, especially if the standards are implemented or referenced in national or regional building codes.

Therefore each EPB standard is accompanied by an informative technical report, like this one, where all informative content is collected, to ensure a clear separation between normative and informative contents (see CEN/TS 16629[2]):

- to avoid flooding and confusing the actual normative part with informative content,

- to reduce the page count of the actual standard, and
- to facilitate understanding of the set of EPB standards.

This was also one of the main recommendations from the European CENSE project<sup>[17]</sup> that laid the foundation for the preparation of the set of EPB standards.

### **This document**

This document accompanies ISO 52018-1, which forms part of the set EPB standards.

The role and the positioning of the accompanied standard in the set of EPB standards is defined in the Introduction to ISO 52018-1.

General aspects of EPB indicators, requirements, ratings and certificates and application to the overall energy performance of buildings can be found in ISO 52003-1 <sup>[5]</sup> and ISO/TR 52003-2 <sup>[6]</sup>.

### **Accompanying spreadsheet**

Because in the accompanying document ISO 52018-1 no calculation procedures are defined, an accompanying calculation spreadsheet is not relevant.



# Energy performance of buildings — Indicators for partial EPB requirements related to thermal energy balance and fabric features —

## Part 2: Explanation and justification of ISO 52018-1

### 1 Scope

This document refers to ISO 52018-1.

ISO 52018-1 gives a succinct enumeration of possible requirements related to thermal energy balance features and to fabric features. It also provides tables for regulators to report their choices in a uniform manner. This document provides many background considerations that can help both private actors and public authorities, and all stakeholders involved, to take informed decisions.

This document does not contain any normative provision.

### 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.

ISO 52018-1, *Energy performance of buildings – Indicators for partial EPB requirements related to thermal energy balance and fabric features – Part 1: Overview of options*

NOTE More information on the use of EPB module numbers, in all EPB standards, for normative references to other EPB standards is given in ISO/TR 52000-2.

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 52018-1 apply.

More information on some key EPB terms and definitions is given in ISO/TR 52000-2[4].

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 4 Symbols and subscripts

For the purposes of this document, the symbols and subscripts given in ISO 52018-1 apply.

More information on key EPB symbols and subscripts is given in ISO/TR 52000-2[4].