ISO 18292:2011-04 (E)

Energy performance of fenestration systems for residential buildings - Calculation procedure

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 Symbols and units 3

5 Principle 4
5.1 Introduction 4
5.2 Heating energy performance 5
5.3 Cooling energy performance 5

6 Methodology and basic equations 6
6.1 General 6
6.2 The fenestration energy performance for heating 9
6.3 The fenestration energy performance for cooling 9
6.4 The heat balance elements 10
6.5 Assessment of the solar control potential of the rated fenestration system 12

7 Climate data 13
7.1 Introduction 13
7.2 External air temperature 13
7.3 Solar radiation 13
7.4 Wind speed 13

8 Basic thermal and solar-optical fenestration properties 14
8.1 Introduction 14
8.2 Thermal transmittance, U-value 14
8.3 Total solar energy transmittance or solar factor, g-value 14
8.4 Daylight potential 14
8.5 Air infiltration (air permeability) and ventilation 15

9 Reference building 16
9.1 Introduction 16
9.2 Overview of data 17

10 Assessment report 17

Annex A (informative) Explanation of gain/loss utilization factor method used in ISO 13790 for the fenestration system energy balance equation 18

Annex B (informative) Assessment of the solar control potential of the rated fenestration system ... 23

Annex C (informative) Example of the calculation of PE, H,w and PE, C,w using a monthly method . 26

Bibliography 32