First edition
2009-02-15

Hygrothermal performance of buildings — Calculation and presentation of climatic data —

Part 2: Hourly data for design cooling load

Performance hygrothermique des bâtiments — Calcul et présentation des données climatiques —

Partie 2: Données horaires pour la charge de refroidissement de conception

Reference number
ISO 15927-2:2009(E)

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Published in Switzerland

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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 15927-2 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 89, *Thermal performance of buildings and building components*, in collaboration with Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 2, *Calculation methods*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 15927 consists of the following parts, under the general title *Hygrothermal performance of buildings — Calculation and presentation of climatic data*:

— *Part 1: Monthly means of single meteorological elements*

— *Part 2: Hourly data for design cooling load*

— *Part 3: Calculation of a driving rain index for vertical surfaces from hourly wind and rain data*

— *Part 4: Hourly data for assessing the annual energy use for heating and cooling*

— *Part 5: Data for design heat load for space heating*

— *Part 6: Accumulated temperature differences (degree-days)*

Introduction

The choice of design load for space cooling is a matter of balancing user needs against cost. On the one hand, users expect a cooling system to maintain the internal temperatures needed for health and comfort; on the other hand, very high cooling loads can arise from extreme meteorological conditions. It is usually uneconomic to design cooling systems for rare extremes, as this leads to high capital cost and, usually, to lower operational efficiency of the system. The highest cooling loads occur with a combination of high daily mean dry-bulb temperature and dewpoint temperature, high daily total irradiation, low daily swing in temperature and low wind speed. Data are therefore needed on the values of these parameters when they occur in combination at specific return periods.