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Solar energy — Solar thermal collectors — Test methods

Énergie solaire — Capteurs thermiques solaires — Méthodes d'essai



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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

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.

ISO 9806 was prepared by Technical Committee ISO/TC 180, *Solar energy*, and by Technical Committee CEN/TC 312, *Thermal solar systems and components* in collaboration.

This first edition cancels and replaces the first editions EN 12975-2:2006, ISO 9806-1:1994, ISO 9806-2:1995, and ISO 9806-3:1995, which have been technically revised.

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Introduction

This International Standard defines procedures for testing fluid heating solar collectors for performance, reliability, durability and safety under well-defined and repeatable conditions. It contains performance test methods for conducting tests outdoors under natural solar irradiance and natural and simulated wind and for conducting tests indoors under simulated solar irradiance and wind. Outdoor tests can be performed either steady-state or as all-day measurements, under changing weather conditions.

Collectors tested according to this International Standard represent a wide range of applications, e.g. tracking concentrating collectors for thermal power generation and process heat, glazed flat plate collectors and evacuated tube collectors for domestic water and space heating, unglazed collectors for heating swimming pools or other low temperature applications. Air heating collectors have been included in the scope of this International Standard. Similarly, collectors using external power sources for normal operation and/or safety purposes (overheating protection, environmental hazards, etc.) are also considered.