



NSAI
Standards

Standard Recommendation
S.R. 50-2:2012

Building services - Code of practice - Part 2: Thermal solar systems

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S.R. 50-2:2012

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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Foreword

This S.R. has been established to elaborate on the requirements for solar water heating systems.

This S.R. provides recommendations for the design, installation, commissioning and maintenance of solar water heating systems for domestic buildings. The document takes account of relevant European Standards in this area and the Building Regulations Technical Guidance Documents, see F.2.

The guidelines are intended to assist providers and specifiers of solar water heating systems, in the interpretation of the requirements and to provide guidance as to how the requirements should be addressed.

Although this document is a “Standards Recommendation” the verb form “shall” is used extensively to enable users to certify compliance to its provisions.

The emphasis is on general principles, and not on detailed aspects of particular systems. As the construction industry becomes more familiar with all aspects of solar water heating systems, technical issues may arise requiring this S.R. to be reviewed.

Annex G comprises an environmental checklist which highlights the clauses of this S.R. that address environmental aspects.

References followed by square brackets, [x], can be found in the Bibliography.

In line with international standards practice the following representation of numbers and numerical values apply.

The decimal point is shown as a comma (,) throughout this Irish Standard.

Each group of three digits reading to the left or to the right of a decimal sign are separated by a space from preceding digits or following digits respectively.

EXAMPLE	23 456	2 345	2,345	2,345 6	2,345 67
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Building services — Code of practice — Part 2: Thermal solar systems

1 Scope

This S.R. provides general guidelines for the design, installation and commissioning of solar water heating systems, in single dwellings, where:

- the solar water heating system is incorporated into, and the solar collector is an integrated or stand alone element of, the external building envelope; and
- the solar collector area is less than 20 m² and the solar heated water storage is less than or equal to 1 000 litres.

This S.R. provides guidance on:

- a) Design, installation, commissioning and workmanship requirements for solar water heating systems and their associated fittings and accessories;
- b) Structural, constructional and weathertightness aspects of the solar collector installation, including durability, fire resistance and resistance to rain, wind, and frost;
- c) Use of solar water heating systems incorporating vented and unvented water storage; and
- d) Environmental issues and health and safety issues.

Solar collectors covered by this S.R. include flat plate collectors and evacuated tube collectors, either integrated into the roof structure or fitted on the roof. The principles of this S.R. apply to all solar water heating installations with the exception of subclause 5.3, 5.4.1 and 5.4.2 which are specific to roof installations.

The design, installation and commissioning of solar water heating systems are subject to the requirements of all parts of the Building Regulations. Issues of particular relevance where, for example, roof mounted solar collectors are fitted, may include weathertightness, fire safety, structural safety etc. Compliance with all parts of the Building Regulations can be verified through Irish Agrément Board certification or equivalent.

Applications for space heating, heating of swimming pools and installations onto facades of buildings are outside of the scope of this S.R.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this S.R. and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ICP 2:2002, *Slating and tiling*

S.R. 50-1, *Building services — Code of practice — Part 1: Domestic plumbing and heating*

S.R. CEN/TS 1187, *Test methods for external fire exposure to roofs*

I.S. EN 1490, *Building valves — Combined temperature and pressure relief valves — Tests and requirements*

I.S. EN 1991-1-1, *Eurocode 1: Actions on structures — Part 1-1: General actions — Densities, self-weight, imposed loads for buildings*

I.S. EN 1991-1-3:2003+NA:2007+A1:2010, *Eurocode 1: Actions on structures — Part 1-3: General actions — Snow loads (Including Irish National Annex)*

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