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NSAI Standards

Standard Recommendation
S.R. 50-3:2021

Code of practice for building services - Part 3 - Hot and cold water supply for dwellings

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Foreword

This document is an Irish Standard Recommendation (S.R.). It provides a Code of Practice that specifies the Irish National requirements which are additional to existing Irish Standards.

This Code of Practice has been prepared with the assistance of the National Standards Authority of Ireland Water Supply Committee, NSAI/TC 10/WG 3.

This Code of Practice promotes higher standards of quality in the design, installation, maintenance and commissioning of domestic plumbing and water supply.

This is the first edition of S.R. 50-3.

The recommendations in this Code of Practice encourage uniformity of application.

The S.R. 50 series is made up of number of parts that compliment various sections of domestic plumbing systems:

— S.R. 50-1 covers the requirements for water-based central heating systems used for space heating in dwellings;

— S.R. 50-2 covers the requirements for solar thermal systems used for heating domestic hot water in dwellings;

— S.R. 50-3 covers the requirements for the conveyance of potable cold water and domestic hot water and cold water from the mains supply to the draw off points within the dwelling and its curtilages.

— S.R. 50-4 covers the requirements for the design, installation and commissioning of residential heat pumps in new and existing dwellings.

In preparing this Code of Practice the assumption has been made that the reader has suitable knowledge and understanding of the subject. The National Standards Authority of Ireland wishes to acknowledge the adaptation of numerous provisions of BS 8558:2015, published by the British Standards Institution, incorporated into many sections of this Code of Practice.

There are a number of Annexes to this Code of Practice. These Annexes are referred to as either Normative or Informative Annexes. Normative Annexes are mandatory for compliance with this Code of Practice whereas Informative Annexes are for information only.

This Code of Practice represents a standard of good practice but compliance with it does not, in itself, confer immunity from legal obligations, regulations and local by-laws.

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.

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Introduction

This Code of Practice, S.R. 50-3, sets out the requirements for the design, installation and commissioning of domestic cold-water and domestic hot-water supply systems in domestic dwellings.

This Code of Practice is complementary to the I.S EN 806 series of European Standards which have been adopted as Irish Standards:

— I.S. EN 806-1, *Specifications for installations inside buildings conveying water for human consumption - Part 1: General*

— I.S. EN 806-2, *Specification for installations inside buildings conveying water for human consumption - Part 2: Design*

— I.S. EN 806-3, *Specifications for installations inside buildings conveying water for human consumption - Part 3: Pipe sizing - Simplified method*

— I.S. EN 806-4, *Specifications for installations inside buildings conveying water for human consumption - Part 4: Installation*

— I.S. EN 806-5, *Specifications for installations inside buildings conveying water for human consumption - Part 5: Operation and maintenance*

The main objectives of this Code of Practice are to ensure that:

— deterioration in water quality within the water supply system is avoided;

— the required flow of water and pressure is available at the draw-off points and at the connection points of water using appliances;

— the potable water meets the standards for the physical, chemical and microbiological quality at the draw-off points;

— all parts of the water supply system do not cause danger to health and do not damage property within calculated lifetimes;

— the maintenance of the water supply system can achieve the functional requirements at all times during its lifetime;

— sound levels are kept to a practicable minimum; and

— contamination of the public water supply, undue water consumption, leakage and misuse is avoided.

This Code of Practice is intended for use by engineers, architects, surveyors, contractors, installers and inspection authorities involved in the supply, installation, operation and maintenance of hot-water and cold-water supply systems in buildings.

The various parts of S.R. 50 can be used together to design, install and commission water-based heating systems for space heating and for heating domestic hot water, which can include solar thermal heating.

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Building services — Code of practice — Water supply for domestic use within dwellings and their curtilages

1 Scope

This Code of Practice specifies the requirements for and gives recommendations on the design, installation, alteration, testing, maintenance and operation of potable water supply systems within dwellings and for pipework outside of dwellings but within the curtilages.

It covers the system of pipes, fittings and connected appliances installed for supplying potable water, cold water and hot water in a dwelling.

Where there is a private potable water supply within the property boundary, the scope of this document also covers the pipe system from the point of connection from that private water supply.

The sphere of application ends at the downstream end of the potable water supply system at the draw-off and connection points.

The piping of the waste water drainage system within the dwelling is not within the scope of this document.

The connection to greywater recovery systems and rainwater harvesting systems are included in the scope of this Code of Practice.

The heating system to provide heat to domestic hot water is not within the scope of this document. Water-based heating systems are covered by S.R. 50-1 and solar thermal heating is covered by S.R. 50-2.

2 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.

NOTE For Standards harmonised to a European Directive or Regulation, the version of the harmonised Standard cited in the Official Journal of the European Union is used for demonstrating legal compliance and CE marking.

I.S. 370, *Colour code for buried plastics piping*

I.S. 10101:2020, *National rules for electrical installations*

I.S. EN 257, *Mechanical thermostats for gas-burning appliances*

I.S. EN 545, *Ductile iron pipes, fittings, accessories and their joints for water pipelines - Requirements and test methods*

I.S. EN 751-1, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 1: Anaerobic jointing compounds*

I.S. EN 751-2, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 2: Non-hardening jointing compounds*

I.S. EN 751-3, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 3: Unsintered PTFE tapes*

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