AS/NZS 5149.3:2016

Australian/New Zealand Standard™

Refrigerating systems and heat pumps—Safety and environmental requirements

Part 3: Installation site (ISO 5149-3:2014, MOD)

STANDARDS Australia

STANDARDS NEW ZEALAND PAEREWA AOTEAROA

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-006, Refrigeration. It was approved on behalf of the Council of Standards Australia on 7 September 2016 and by the New Zealand Standards Approval Board on 28 September 2016.
This Standard was published on 19 October 2016.

The following are represented on Committee ME-006:

Air Conditioning and Refrigeration Equipment Manufacturers Association of Australia
Air Conditioning and Refrigeration Wholesalers Association
Australian Industry Group
Australian Institute of Refrigeration, Air Conditioning and Heating
Australian National Retailers Association
Australian Refrigeration Council
Climate Control Companies Association, New Zealand
Consumer Electronics Suppliers Association
Department of Environment
Department of Natural Resources and Mines, Qld
Environmental Protection Authority, New Zealand
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of Standards Australia or the New Zealand Standards Executive at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 5149.3:2016.

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Part 3: Installation site (ISO 5149-3:2014, MOD)

Originated in Australia as part of AS CB3—1933.
Final Australian edition AS 1677—1986.
Originated in New Zealand as NZSS 1653:1962.
Final New Zealand editions NZS 5235.1:1991 and NZS 5235.2:1988.
AS 1677—1986, NZS 5235.1:1991 and NZS 5235.2:1998 jointly revised, amalgamated and redesignated in part as AS/NZS 1677.2:1998.
Revised and redesignated in part as AS/NZS 5149.3:2016.

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, PO Box 1473, Wellington 6011.

ISBN 978 1 76035 585 2

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-006, Refrigeration, to supersede, in part, AS/NZS 1677.2, *Refrigerating systems*, Part 2: *Safety requirements for fixed applications*.

The objective of this series of Standards is to promote the safe design, construction, disposal, installation and operation of refrigerating systems.

This Standard does not address the hazards caused by products of combustion or decomposition of refrigerants. These products may include (but are not limited to) hydrogen fluoride. Exposure to these products can be harmful.

Lubricants and associated hazards are also not covered by this Standard. Lubricants can present significant health and environmental hazards.

AS/NZS 60079.14 is the current Australian/New Zealand Standard on electrical installations design, selection and erection in explosive atmospheres.

The AS/NZS 5149 series consists of the following parts under the general title, *Refrigerating systems and heat pumps—Safety and environmental requirements*:

Part 1: *Definitions, classification and selection criteria (ISO 5149-1:2014, MOD)*
Part 2: *Design, construction, testing, marking and documentation (ISO 5149-2:2014, MOD)*
Part 3: *Installation site (ISO 5149-3:2014, MOD)* (this Standard)
Part 4: *Operation, maintenance, repair and recovery (ISO 5149-4:2014, MOD)*

This Standard is an adoption with national modifications and has been reproduced from ISO 5149-3:2014, *Refrigerating systems and heat pumps—Safety and environmental requirements*, Part 3: *Installation site*, and has been varied as indicated to take account of Australian/New Zealand conditions. The modifications are specified in the normative Appendix ZZ following the source text.

These modifications to the ISO source text are essential for compliance with this Australian/New Zealand Standard.

Appendix ZA of AS/NZS 5149.1 provides guidance and examples on refrigerant charge limit determination for information only.

This Standard is to be read in conjunction with relevant legislation, regulation and national Refrigeration Industry Codes of Practice.

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text 'this part of ISO 5149' should read 'this Australian/New Zealand Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
ISO		AS/NZS	
		4024	Safety of machinery
13850	Safety of machinery—Emergency stop—Principles of design	4024.1201	Part 1604: Design of controls, interlocks and guarding—Emergency stop—Principles for design

IEC		AS/NZS	
60364	Low-voltage electrical installations		
60364-1	Part 1: Fundamental principles, assessment of general characteristics, definitions	3000	Electrical installations (known as the Australian/New Zealand Wiring Rules)
60364	Electrical installations of buildings		
60364-5	Part 5: Selection and erection of electrical equipment	3000	Electrical installations (known as the Australian/New Zealand Wiring Rules)

Only normative references that have an alternative Australian or Australian/New Zealand Standard have been listed.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

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AUSTRALIAN/NEW ZEALAND STANDARD

Refrigerating systems and heat pumps—Safety and environmental requirements

Part 3:
Installation site (ISO 5149-3:2014, MOD)

1 Scope

This part of ISO 5149 is applicable to the installation site (plant space and services). It specifies requirements for the site for safety, which could be needed because of, but not directly connected with, the refrigerating system and its ancillary components.

This part of ISO 5149 is applicable to new refrigerating systems, extensions or modifications of existing systems, and for used systems being transferred to and operated on another site. This part of ISO 5149 also applies in the case of the conversion of a system for another refrigerant.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document 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.

ISO 5149-1:2014, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 1: Definitions, classification and selection criteria*

ISO 5149-2:2014, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 2: Design, construction, testing, marking and documentation*

ISO 13850, *Safety of machinery — Emergency stop — Principles for design*

IEC 60204-1, *Safety of machinery — Electrical equipment of machines — General requirements*

IEC 60364-1, *Low-voltage electrical installations — Part 1: Fundamental principles, assessment of general characteristics, definitions*

IEC 60364-5, *Electrical installations of buildings — Part 5: Selection and erection of electrical equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5149-1 apply.

4 Location of refrigerating equipment

4.1 General

Refrigerating equipment can be sited outside the building in the open air, in a designated machinery room, in occupied areas, or in unoccupied areas not designated as a machinery room.

The refrigerating equipment can be contained in a ventilated enclosure provided by the manufacturer. Requirements for this enclosure are given in ISO 5149-2:2014, 5.2.17.