

Australian/New Zealand Standard™

**Refrigerating systems and heat  
pumps—Safety and environmental  
requirements**

**Part 4: Operation, maintenance, repair  
and recovery (ISO 5149-4:2014, MOD)**

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## **AS/NZS 5149.4:2016**

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.

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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  
Green Cooling Association  
Institute of Refrigeration Heating and Air Conditioning Engineers of New Zealand  
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# Australian/New Zealand Standard™

## Refrigerating systems and heat pumps—Safety and environmental requirements

### Part 4: Operation, maintenance, repair and recovery (ISO 5149-4:2014, MOD)

Originated in Australia as part of AS CB3—1933.

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-006, Refrigeration/Refrigerating systems, Part 2: Safety requirements for fixed applications, 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.

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)*

Part 4: *Operation, maintenance, repair and recovery (ISO 5149-4:2014, MOD)* (this Standard)

This Standard is an adoption with national modifications and has been reproduced from ISO 5149-4:2014, *Refrigerating systems and heat pumps—Safety and environmental requirements, Part 4: Operation, maintenance, repair and recovery*, 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 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:

<i>Reference to International Standard</i>	<i>Australian or Australian/New Zealand Standard</i>
ISO	AS/NZS
	4211 Gas recovery or combined recovery and recycling equipment
11650 Performance of refrigerant recovery and/or recycling equipment	4211.3 Part 3: Fluorocarbon refrigerants from commercial/domestic refrigeration and air-conditioning systems

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

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex or appendix to which they apply. A ‘normative’ annex or appendix is an integral part of a Standard, whereas an ‘informative’ annex or appendix is only for information and guidance.

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## AUSTRALIAN/NEW ZEALAND STANDARD

**Refrigerating systems and heat pumps—Safety and environmental requirements**

## Part 4:

## Operation, maintenance, repair and recovery (ISO 5149-4:2014, MOD)

**1 Scope**

This part of ISO 5149 specifies requirements for safety and environmental aspects in relation to operation, maintenance and repair of refrigerating systems and the recovery, reuse and disposal of all types of refrigerant, refrigerant oil, heat transfer fluid, refrigerating system and part thereof.

These requirements are intended to minimize risks of injury to persons and damage to property and the environment resulting from improper handling of the refrigerants or from contaminants leading to system breakdown and resultant emission of the refrigerant.

[Subclauses 4.1.1, 4.1.2, 4.3, 5.1.1 to 5.1.4, 5.2, 5.3.1, 5.3.3](#) and [6.6](#) of this part of ISO 5149 are not applicable to unitary systems having a power cord, being factory sealed, and in conformance with IEC 60335 series.

**2 Normative references**

The following referenced documents are indispensable for the application 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.

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 11650, *Performance of refrigerant recovery and/or recycling equipment*

IEC 60335-2-104, *Household and similar electrical appliances — Safety — Part 2-104: Particular requirements for appliances to recover and/or recycle refrigerant from air conditioning and refrigeration equipment*

**3 Terms and definitions**

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

**4 General requirements****4.1 Operation instructions**

**4.1.1** Care shall be taken to ensure that the personnel charged with the operation, supervision and maintenance of the refrigerating system are adequately instructed and competent with respect to their tasks. The installer of the refrigerating system shall draw attention to the necessity for adequate instruction of operating and supervising personnel. Typical in-service inspection requirements are shown in [Annex D](#).