

STN	Chladiace systémy a tepelné čerpadlá Požiadavky na bezpečnosť a ochranu životného prostredia Časť 4: Prevádzka, údržba, oprava a zhodnotenie (ISO 5149-4: 2022)	STN EN ISO 5149-4 14 0647
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Refrigerating systems and heat pumps - Safety and environmental requirements - Part 4: Operation, maintenance, repair and recovery (ISO 5149-4:2022)

Táto norma obsahuje anglickú verziu európskej normy.

This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/25

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EUROPÄISCHE NORM

EN ISO 5149-4

July 2025

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Supersedes EN 378-4:2016+A1:2019

English Version

**Refrigerating systems and heat pumps - Safety and
environmental requirements - Part 4: Operation,
maintenance, repair and recovery (ISO 5149-4:2022)**

Systèmes frigorifiques et pompes à chaleur - Exigences
de sécurité et d'environnement - Partie 4:
Fonctionnement, maintenance, réparation et
récupération (ISO 5149-4:2022)

Kälteanlagen und Wärmepumpen -
Sicherheitstechnische und umweltrelevante
Anforderungen - Teil 4: Betrieb, Instandhaltung,
Instandsetzung und Rückgewinnung (ISO 5149-
4:2022)

This European Standard was approved by CEN on 13 July 2025.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 5149-4:2025 (E)

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European foreword

The text of ISO 5149-4:2022 has been prepared by Technical Committee ISO/TC 86 "Refrigeration and air-conditioning" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 5149-4:2025 by Technical Committee CEN/TC 182 "Refrigerating systems, safety and environmental requirements" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2026, and conflicting national standards shall be withdrawn at the latest by January 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 5149-4:2022 has been approved by CEN as EN ISO 5149-4:2025 without any modification.

INTERNATIONAL STANDARD

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5149-4

Second edition
2022-11

Refrigerating systems and heat pumps — Safety and environmental requirements —

Part 4: Operation, maintenance, repair and recovery

*Systèmes frigorifiques et pompes à chaleur — Exigences de sécurité et
d'environnement —*

Partie 4: Fonctionnement, maintenance, réparation et récupération



Reference number
ISO 5149-4:2022(E)

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 86, *Refrigeration and air-conditioning*, Subcommittee SC 1, *Safety and environmental requirements for refrigerating systems*.

This second edition cancels and replaces the first edition (ISO 5149-4:2014), which has been technically revised.

The main changes are as follows:

- revision of [Figure 2](#);
- addition of guidelines for repairs of equipment using flammable refrigerants in [Annex E](#).

A list of all parts in the ISO 5149 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Refrigerating systems and heat pumps — Safety and environmental requirements —

Part 4: Operation, maintenance, repair and recovery

1 Scope

This document 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.

This document does not cover "motor vehicle air conditioners" constructed according to the product standards such as ISO 13043.

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.

2 Normative 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.

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

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

ISO 5149-3, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 3: Installation site*

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*

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