ICS 27.080, 27.200 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2025

STN	**Chladiace systémy a tepelné čerpadlá Poistné zariadenia proti prekročeniu tlaku a im príslušné potrubia Výpočtové postupy (ISO 24664: 2024)**	**STN EN ISO 24664** 14 2006

Refrigerating systems and heat pumps - Pressure relief devices and their associated piping - Methods for calculation (ISO 24664:2024)

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. 03/25

Obsahuje: EN ISO 24664:2024, ISO 24664:2024

Oznámením tejto normy sa ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 24664

December 2024

ICS 27.080; 27.200

Supersedes EN 13136:2013+A1:2018

English Version

Refrigerating systems and heat pumps - Pressure relief devices and their associated piping - Methods for calculation (ISO 24664:2024)

Systèmes de réfrigération et pompes à chaleur - Dispositifs de limitation de pression et tuyauteries associées - Méthodes de calcul (ISO 24664:2024)

Kälteanlagen und Wärmepumpen - Druckentlastungseinrichtungen und zugehörige Leitungen - Berechnungsverfahren (ISO 24664:2024)

This European Standard was approved by CEN on 17 September 2024.

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COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 24664:2024) has been prepared by Technical Committee ISO/TC 86 "Refrigeration and air-conditioning" in collaboration with 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of an identical text or by endorsement, at the latest by June 2025, and conflicting national standards shall be withdrawn at the latest by June 2025.

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.

This document supersedes EN 13136:2013+A1:2018.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 24664:2024 has been approved by CEN as EN ISO 24664:2024 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the essential requirements of Directive 2014/68/EU (Pressure equipment Directive) aimed to be covered

This European Standard has been prepared under a Commission's standardization request M/601 to provide one voluntary means of conforming to essential requirements of Directive 2014/68/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on the harmonization of the laws of the Member States relating to the making available on the market pressure equipment.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 and application of the edition of the normatively referenced standards as given in Table ZA.2 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2014/68/EU (Pressure equipment Directive)

Essential Requirements of Directive 2014/68/EU	Clause(s)/subclause(s) of this EN	Remarks/Notes
2.10	Clause 6	Protection against exceeding the allowable limits of pressure equipment
2.12	Clause 6.2.1	External Fire
2.11.2	Clause 5 Clause 7 Clause 8	Pressure limiting devices

Table ZA.2 — Applicable Standards to confer presumption of conformity as described in this Annex ZA

Reference in Clause 2	European Standard Edition	Title	Corresponding European Standard Edition
ISO 4126-1:2013 /Amd 1:2016	ISO 4126-1:2013 ISO 4126-1:2013/Amd 1:2016	Safety devices for protection against excessive pressure — Part 1: Safety valves	EN ISO 4126-1:2013 EN ISO 4126-1:2013/A1:2016
ISO 4126-2:2018	ISO 4126-2:2018	Safety devices for protection against excessive pressure — Part 2: Bursting disc safety devices	EN ISO 4126-2:2019
ISO 21922:2021	ISO 21922:2021	Refrigerating systems and heat pumps — Valves — Requirements, testing and marking	EN ISO 21922:2021

The documents listed in the Column 1 of Table ZA.2, in whole or in part, are normatively referenced in this document, i.e. are indispensable for its application. The achievement of the presumption of conformity is subject to the application of the edition of standards as listed in Column 4 or, if no European Standard Edition exists, the European Standard Edition given in Column 2 of Table ZA.2.

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

International Standard

ISO 24664

Refrigerating systems and heat pumps — Pressure relief devices and their associated piping — Methods for calculation

Systèmes de réfrigération et pompes à chaleur — Dispositifs de limitation de pression et tuyauteries associées — Méthodes de calcul

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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 document 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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 182, *Refrigerating systems, safety and environmental requirements,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

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Introduction

This document is based on EN 13136:2013+A1:2018 and applicable parts of ISO 4126-1:2013, ISO 4126-2:2018 and ISO 21922:2021.

It is suited to the specific requirements, and includes the data, of refrigerating systems. It provides means of satisfying the pressure relief devices requirements of EN 378-2:2016 and ISO 5149-2:2014.

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International Standard **ISO 24664:2024(en)**

Refrigerating systems and heat pumps — Pressure relief devices and their associated piping — Methods for calculation

1 Scope

This document describes the calculation of:

— mass flow for sizing pressure relief devices for parts of refrigerating systems;

— discharge capacities for pressure relief valves and other pressure relief devices in refrigerating systems including the necessary data for sizing these when relieving to atmosphere or to part of the refrigerating system at lower pressure;

— the pressure loss in the inlet and outlet lines of pressure relief valves and other pressure relief devices and includes the necessary data.

This document specifies the requirements for selection of pressure relief devices to prevent excessive pressure due to internal and external heat sources, the sources of increasing pressure (e.g. compressor, heaters, etc.) and thermal expansion of trapped liquid.

NOTE The term "refrigerating system" used in this document includes heat pumps.

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 4126-1:2013/Amd 1:2016, *Safety devices for protection against excessive pressure — Part 1: Safety valves*

ISO 4126-2:2018, *Safety devices for protection against excessive pressure — Part 2: Bursting disc safety devices*

ISO 21922:2021, *Refrigerating systems and heat pumps — Valves — Requirements, testing and marking*

EN 13501-1:2018, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

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