

Chladiace zariadenia a tepelné čerpadlá. Požiadavky na bezpečnosť a ochranu životného prostredia. Časť 3: Miesto inštalácie a ochrana personálu.

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Refrigerating systems and heat pumps - Safety and environmental requirements - Part 3: Installation site and personal protection

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

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#### **English Version**

# Refrigerating systems and heat pumps - Safety and environmental requirements - Part 3: Installation site and personal protection

Systèmes frigorifiques et pompes à chaleur - Exigences de sécurité et d'environnement - Partie 3: Installation in situ et protection des personnes Kälteanlagen und Wärmepumpen -Sicherheitstechnische und umweltrelevante Anforderungen - Teil 3: Aufstellungsort und Schutz von Personen

This European Standard was approved by CEN on 3 September 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

| Contents |  |           |
|----------|--|-----------|
| Europ    | ean foreword   | 5         |
| Introd   | uction   | 6         |
| 1        | Scope  | 7         |
| 2        | Normative references   |           |
|          |  |           |
| 3        | Terms, definitions and abbreviated terms   |           |
| 4        | Location of refrigerating equipment  |           |
| 4.1      | General  |           |
| 4.2      | Refrigerating equipment located in the open air  |           |
| 4.3      | Refrigerating equipment located in a machinery room                                    |           |
| 4.4      | Refrigerating equipment located in the occupied space                                  | 9         |
| 4.5      | Refrigerating equipment located in an unoccupied space not designated a machinery room | <b></b> 9 |
| 4.6      | Refrigerating equipment located in a ventilated enclosure within an occupied space.    | 10        |
| 4.7      | Piping duct or shaft   |           |
| 5        | Machinery rooms  | 10        |
| 5.1      | Access to machinery rooms  |           |
| 5.2      | Venting from or through the machinery room   |           |
| 5.3      | Combustion equipment and air compressors   |           |
| 5.4      | Open flame   |           |
| 5.5      | Storage  |           |
| 5.6      | Remote emergency switch  |           |
| 5.7      | Exterior openings of the machinery room  |           |
| 5.8      | Piping and ducting   | 11        |
| 5.9      | Normal lighting  | 11        |
| 5.10     | Emergency lighting   | 11        |
| 5.11     | Dimensions and accessibility   | 11        |
| 5.12     | Doors, walls and ducts   |           |
|          | Doors and openings   |           |
|          | Emergency  |           |
|          | Walls, floor and ceiling   |           |
|          | Service ducts  |           |
|          | Ventilation ducts  |           |
| 5.13     | Ventilation  |           |
|          | General  |           |
|          | Ventilation for normal operating conditions or when machinery room is occupied         |           |
|          | Emergency mechanical ventilation   |           |
|          | Required airflow for emergency mechanical ventilation                                  |           |
|          | Mechanical ventilation openings  |           |
| 5.14     | Machinery rooms for groups A2L, A2, A3, B2L, B2 and B3 refrigerants                    |           |
|          | General  |           |
|          | Additional requirements for R-717  |           |
|          | Maximum surface temperature  |           |
|          | Doors and openings   |           |
| 2.14.3   | voors and openings   | 13        |

| 6          | Requirements for alternative provisions  |    |
|------------|--|----|
| 6.1        | General  | 15 |
| 6.2        | Occupied space   |    |
| 6.3        | Ventilation  |    |
| 6.3.1      | General  | 15 |
| 6.3.2      | Dilution transfer openings (air transfer openings for dilution) for natural convection               | 15 |
| 6.3.3      | Mechanical ventilation   |    |
| 6.4        | Safety shut off valves   | 17 |
| 6.4.1      | General  | 17 |
| 6.4.2      | Location   | 17 |
| 6.4.3      | Design   | 17 |
| 7          | Electrical installations   | 17 |
| 7.1        | General requirements   |    |
| 7.2        | Main power supply  |    |
| 7.3        | Electrical equipment in machinery rooms with refrigerating systems containing flammable refrigerants |    |
| 0          | Safety alarms  |    |
| 8<br>8.1   | General  |    |
| 8.2        | Alarm system power   |    |
| 8.3        | Alarm system warning   |    |
| 8.4        | Additional alarm system requirements for R-717 systems with charges above                            | 10 |
| 0.1        | 3 000 kg   | 18 |
| 9          | Detectors  | 19 |
| 9.1        | General  | 19 |
| 9.2        | Location of detectors  |    |
| 9.3        | Type and performance of detectors  |    |
| 9.3.1      | General  |    |
| 9.3.2      | Refrigerant detectors for A2, A2L, B2L (except for R-717), B2, A3 and B3 refrigerants .              |    |
| 9.3.3      | R-717 detectors  | _  |
| 9.4        | Installation   | 20 |
| 10         | Instruction manuals, notices and inspections   | 20 |
| 10.1       | Instruction manual   | 20 |
| 10.2       | Warning notice   | 21 |
| 10.3       | Visual inspection of the site  | 21 |
| 10.4       | Maintenance of the site  | 21 |
| 11         | Heat sources and temporary high temperatures at the site   | 21 |
| Anhar      | ng A (informative) Personal protective equipment   | 23 |
| A.1        | General requirements   | 23 |
| A.1.1      | Type of protective equipment   | 23 |
| A.1.2      | Accessibility  | 23 |
| A.1.3      | Location   | 23 |
| A.1.4      | Check and maintenance  | 23 |
| A.1.5      | Temperature  | 23 |
| A.1.6      | Respirators  | 23 |
| <b>A.2</b> | Normal use   | 24 |

## EN 378-3:2016 (E)

| <b>A.3</b> | Emergency use                  | . 24 |
|------------|--------------------------------|------|
| A.3.1      | General                        | . 24 |
| A.3.2      | Respiratory protective devices | . 24 |
| A.3.3      | First aid equipment            | . 24 |
| Biblio     | graphy                         | . 25 |

### **European foreword**

This document (EN 378-3:2016) has been prepared 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 May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

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

This document supersedes EN 378-3:2008+A1:2012.

EN 378 consists of the following parts under the general title "Refrigerating systems and heat pumps — Safety and environmental requirements":

- Part 1: Basic requirements, definitions, classification and selection criteria;
- Part 2: Design, construction, testing, marking and documentation;
- Part 3: Installation site and personal protection;
- Part 4: Operation, maintenance, repair and recovery.

The main changes in part 3 with respect to the previous edition are listed below:

- harmonisation as far as possible with ISO 5149:2014 and ISO 817:2014;
- clarification of when to use of 'special machinery room', and modify to "separate refrigeration machinery room";
- consideration of requirements for 2L refrigerants;
- inclusion of Clause 6 additional measures to support EN 378-1:2016, C.3;
- modification of requirements for sprinkler systems.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

# Introduction

The introduction of EN 378-1 is applicable.

#### 1 Scope

This European Standard specifies the requirements for the safety of persons and property, provides guidance for the protection of the environment and establishes procedures for the operation, maintenance and repair of refrigerating systems and the recovery of refrigerants.

The term "refrigerating system" used in this European Standard includes heat pumps.

This Part 3 of the European Standard is applicable to the installation site (plant space and services). It specifies requirements on the site for safety, which may be needed because of, but not directly connected with, the refrigerating system and its ancillary components.

This standard applies:

- a) to refrigerating systems, stationary or mobile, of all sizes except to vehicle air conditioning systems covered by a specific product standard e.g. ISO 13043;
- b) to secondary cooling or heating systems;
- c) to the location of the refrigerating systems;
- d) to replaced parts and added components after adoption of this standard if they are not identical in function and in the capacity.

Systems using refrigerants other than those listed in of EN 378-1:2016, Annex E are not covered by this standard.

This standard does not apply to goods in storage.

This standard is not applicable to refrigerating systems which were manufactured before the date of its publication as a European Standard except for extensions and modifications to the system which were implemented after publication.

This standard is applicable to new refrigerating systems, extensions or modifications of already existing systems, and for existing stationary systems, being transferred to and operated on another site.

This standard also applies in the case of the conversion of a system for another refrigerant type, in which case conformity with the relevant clauses of parts 1 to 4 of the standard shall be assessed.

#### 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.

EN 378-1:2016, Refrigerating systems and heat pumps — Safety and environmental requirements — Part 1: Basic requirements, definitions, classification and selection criteria

EN 378-2:2016, Refrigerating systems and heat pumps — Safety and environmental requirements — Part 2: Design, construction, testing, marking and documentation

EN 1363 (all parts), Fire resistance tests

EN 1364 (all parts), Fire resistance tests for non-load bearing elements

EN 1365 (all parts), Fire resistance tests for load bearing elements

EN 1366-1, Fire resistance tests for service installations — Part 1: Ventilation ducts

EN 1366-2, Fire resistance tests for service installations — Part 2: Fire dampers

EN 1507, Ventilation for buildings — Sheet metal air ducts with rectangular section — Requirements for strength and leakage

EN 1634 (all parts), Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware

EN 12236, Ventilation for buildings — Ductwork hangers and supports — Requirements for strength

EN 12845, Fixed firefighting systems — Automatic sprinkler systems — Design, installation and maintenance

EN 14624, Performance of portable leak detectors and of room monitors for halogenated refrigerants

EN 60079-10-1, Explosive atmospheres — Part 10-1: Classification of areas — Explosive gas atmospheres (IEC 60079-10-1)

EN 60204-1:2006, Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2005)

EN 60529, Degrees of protection provided by enclosures (IP Code) (IEC 60529)

EN ISO 13850, Safety of machinery — Emergency stop function — Principles for design (ISO 13850)

EN ISO 14122-2, Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2)

ISO 13043, Road vehicles — Refrigerant systems used in mobile air conditioning systems (MAC) — Safety requirements

ISO 817, Refrigerants — Designation and safety classification

IEC 60364, Low-voltage electrical installations

# koniec náhľadu – text ďalej pokračuje v platenej verzii STN