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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 378-3:2016 sisaldab Euroopa standardi EN 378-3:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 378-3:2016 consists of the English text of the European standard EN 378-3:2016.
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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

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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of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.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.

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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*

3 Terms, definitions and abbreviated terms

For the purposes of this document, the terms, definitions and abbreviated terms given in EN 378-1:2016 apply.

4 Location of refrigerating equipment

4.1 General

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

NOTE The refrigerating equipment can be contained in a ventilated enclosure provided by the manufacturer. Requirements for this enclosure are given in EN 378-2:2016, 6.2.15.

4.2 Refrigerating equipment located in the open air

Refrigerating systems sited in the open air shall be positioned to avoid leaked refrigerant flowing into a building or otherwise endangering people and property. The refrigerant shall not be able to flow into any ventilation fresh air opening, doorway, trap door or similar opening in the event of a leak. Where a