

Refrigerating systems and heat pumps — Safety and environmental requirements —

Part 3: Installation site and personal protection

The European Standard EN 378-3:2000, with the incorporation of amendment A1:2003, has the status of a British Standard

ICS 27.080; 27.200

National foreword

This British Standard is the official English language version of EN 378-3:2000, including amendment A1:2003. Together with BS EN 378-1:2000, BS EN 378-2:2000 and BS EN 378-4:2000 it supersedes BS 4434:1995 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee RHE/18, Refrigeration safety, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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This British Standard, having been prepared under the direction of the Engineering Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 September 2000

Summary of pages

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Amendments issued since publication

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English version

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

(includes amendment A1:2003)

Systèmes de réfrigération et pompes à chaleur – Exigences
de sécurité et d'environnement – Partie 3: Installation in situ
et protection des personnes
(inclut l'amendement A1:2003)

Kälteanlagen und Wärmepumpen – Sicherheitstechnische
und umweltrelevante Anforderungen – Teil 3: Aufstellungsort
und Schutz von Personen
(enthält Änderung A1:2003)

This European Standard was approved by CEN on 10 October 1999; amendment A1 was approved by CEN on 20 November 2003.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This European Standard 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 July 2000, and conflicting national standards shall be withdrawn at the latest by July 2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE 1: This European Standard had also been proposed for inclusion in the mandate under the EU Directive 89/392/EEC (Machinery Directive). As the mandate has been given after the standard had been accepted by the Technical Committee for submission to formal vote and in order not to further delay its publication, it will be reviewed within the context of the latest version of the Machinery Directive directly after the publication.

This EN 378-3 is part of a standard consisting of a series of the following parts:

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.

For the 6-month enquiry, the draft standard was issued in 13 parts. After the discussion of the comments received during the enquiry it was decided to rearrange the content of 12 parts and to publish the final standard in the above 4 parts. The remaining Part 13 will be published as a separate standard.

The annexes A, B, C and D of this European Standard are informative.

Foreword to amendment A1

This document EN 378-3:2000/A1:2003 has been prepared by Technical Committee CEN/TC 182, Refrigerating systems, safety and environmental requirements, the secretariat of which is held by DIN.

This Amendment to the European Standard EN 378-3:2000 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom

Introduction

The introduction of EN 378-1 is applicable.

1 Scope

1.1 The scope of EN 378-1 is applicable.

1.2 This Part 3 of the European Standard is applicable to the installation site (design of plant space and services) and personal protective equipment.

1.3 This Part 3 is not applicable to unit systems and self-contained systems which operate with charges of refrigerant up to:

2,5 kg of group L1 refrigerant;
1,5 kg of group L2 refrigerant; and
1,0 kg of group L3 refrigerant.

1.4 Certain clauses and sub-clauses of this Part 3 are not applicable to systems built on site with charges of refrigerant up to:

2,5 kg of group L1 refrigerant;
1,5 kg of group L2 refrigerant; and
1,0 kg of group L3 refrigerant.

These clauses are:

clause 5 and 6.1.2.

1.5 Certain clauses and sub-clauses of this Part 3 are not applicable to unit systems and self-contained systems which operate with charges of refrigerant up to:

10,0 kg of group L1 refrigerant; and
2,5 kg of group L2 refrigerant.

These clauses are:

clause 5;
6.1.2; 6.2.3; 6.2.4;
clause 7.

1.6 For refrigerating systems with a refrigerant charge of up to 10,0 kg of group L1 and up to 2,5 kg of group L2 and L3, clause 9 is only applicable to personnel doing maintenance, repair and recovery.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 378-1

Refrigerating systems and heat pumps – Safety and environmental requirements – Part 1: Basic requirements, definitions, classification and selection criteria

EN 378-2

Refrigerating systems and heat pumps – Safety and environmental requirements – Part 2: Design, construction, testing, marking and documentation

3 Definitions

For the purposes of this European Standard the definitions given in EN 378-1 apply.

4 General requirements

4.1 Installation in relation to occupancies

When installing the system the refrigerant and type of system shall not differ from that selected in EN 378-1 having due regard to the occupancy relevant to the premises for which the refrigerant is utilized so that persons are not endangered.

4.2 Special machinery rooms

Special machinery rooms shall be installed as specified for their design and construction in clause 5.

4.3 Fire extinguishing components

Fire extinguishers shall be in accordance with the requirements of the local fire authorities. The extinguishing fluid shall be selected carefully, since dangerous chemical reactions may occur between certain extinguishing fluids and certain refrigerants.

4.4 Installation of piping, valves and their components

The installation of piping, valves and their components shall be as specified in EN 378-2.

4.5 Refrigerating equipment in the open air

Refrigerating equipment installed in the open air shall be suitable for outside installation. This equipment shall not be accessible to unauthorized persons. If refrigerating equipment is located on a roof, care shall be taken that no refrigerant leaking from this equipment can enter the building or otherwise endanger people.

5 Design and construction of special machinery rooms

5.1 General

In some cases special machinery rooms shall be provided for accommodating parts of refrigerating systems, especially those of the high pressure side, and the compressors, for reasons of safety.

NOTE: Housings kept tight and vented can also serve as special machinery rooms.