

STN	Chladiace zariadenia a tepelné čerpadlá. Požiadavky na bezpečnosť a ochranu životného prostredia. Časť 4: Prevádzka, údržba, oprava a regenerácia.	STN EN 378-4 14 0647
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Refrigerating systems and heat pumps - Safety and environmental requirements - Part 4: Operation, maintenance, repair and recovery

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. 05/17

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Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 378-4

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Supersedes EN 378-4:2008+A1:2012

English Version

**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

Kälteanlagen und Wärmepumpen -
Sicherheitstechnische und umweltrelevante
Anforderungen - Teil 4: Betrieb, Instandhaltung,
Instandsetzung und Rückgewinnung

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.

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

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

Contents	Page
European foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms, definitions and abbreviated terms	6
4 General requirements	6
4.1 Operating instructions.....	6
4.2 Documentation.....	6
5 Maintenance and repair.....	6
5.1 General.....	6
5.2 Maintenance.....	7
5.3 Repair	8
5.4 Change of refrigerant type.....	9
5.4.1 General.....	9
5.4.2 Planning the change of refrigerant type.....	9
5.4.3 Execution of the change of refrigerant type	10
6 Requirements for recovery, reuse and disposal	10
6.1 General requirements	10
6.1.1 Disposal	10
6.1.2 Personnel	10
6.1.3 Parts of refrigerating systems.....	11
6.1.4 Refrigerants	11
6.1.5 Handling	11
6.2 Requirements for recovery and reuse of refrigerant.....	11
6.2.1 General.....	11
6.2.2 Recovery for general reuse.....	12
6.2.3 Recovery for reuse in the same or similar system.....	12
6.2.4 Requirements for refrigerant recovery and recycling equipment and procedures.....	14
6.2.5 Reclaim	14
6.3 Requirements for refrigerant transfer, transport and storage.....	14
6.3.1 General.....	14
6.3.2 Refrigerant transfer	14
6.3.3 Transport	15
6.3.4 Storage	15
6.4 Requirements for recovery equipment.....	15
6.4.1 General.....	15
6.4.2 Operation with respect to the environment.....	16
6.4.3 Performance	16
6.4.4 Operation and maintenance.....	16
6.5 Requirements for disposal	16
6.5.1 Refrigerant not intended for reuse.....	16
6.5.2 Absorbed R-717 (ammonia).....	16
6.5.3 Refrigerating machine oil	16
6.5.4 Other components	16
6.6 Requirements for documentation.....	16

Annex A (normative) Draining the oil from a refrigerating system	17
A.1 General	17
A.2 Ammonia systems.....	17
A.2.1 General	17
A.2.2 Draining procedure	17
Annex B (informative) Guide specification for recycled refrigerant	18
Annex C (informative) Handling and storage of refrigerants	19
C.1 General	19
C.2 Handling.....	19
C.3 Storage.....	20
C.4 Special provisions for handling ammonia vapour during maintenance or decommissioning.....	20
C.4.1 General	20
C.4.2 Limitations of ammonia vapour absorption	21
C.4.3 Procedure for ammonia vapour absorption.....	21
C.4.4 Disposal of the aqua-ammonia solution.....	22
Annex D (informative) In-service inspection	23
D.1 During the operational life of the system, inspection and testing are carried out according to national regulations.....	23
Annex E (informative) Guidelines for repairs of equipment using flammable refrigerants.....	25
E.1 General requirements for equipment.....	25
E.2 Repairs to electrical components	25
E.2.1 Repairs to electrical components	25
E.2.2 Repairs to sealed components.....	25
E.2.3 Repairs to intrinsically safe components.....	26
E.3 Repairs to refrigerating system.....	26
E.4 Requirements for the competent persons.....	27
Bibliography	28

EN 378-4:2016**European foreword**

This document (EN 378-4:2016) 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 378-4:2008+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 4 with respect to the previous edition are listed below:

- *harmonisation as far as possible with ISO 5149:2014;*
- *addition of vacuum procedure in 5.3.8;*
- *addition of moisture test in 6.2.3.*

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.

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 standard applies:

- a) to refrigerating systems, stationary or mobile, of all sizes including heat pumps;
- b) to secondary cooling or heating systems;
- c) to the location of the refrigerating systems;
- d) to parts replaced and components added after adoption of this standard if they are not identical in function and capacity.

This standard does not cover “motor vehicle air conditioners” constructed according to product standards such as ISO 13043.

Systems using refrigerants other than those listed in EN 378-1:2016, Annex E are not covered by this standard unless they have been assigned to a safety class according to ISO 817.

This standard does not apply to goods in storage.

This standard is not applicable to refrigeration systems and heat pumps 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 to another refrigerant type, in which case conformity to the relevant clauses of parts 1 to 4 of the standard shall be assessed.

This Part 4 of the European Standard 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.

These requirements are intended to minimise 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.

Subclauses 4, 5.1.1 to 5.1.4, 5.2, 5.3.1, 5.3.3 and 6.6 of this European Standard are not applicable to unitary systems having a power cord, being factory sealed, and in conformance with EN 60335 series.

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 378-4:2016

EN 378-3, *Refrigerating systems and heat pumps — Safety and environmental requirements - Part 3: Installation site and personal protection*

ISO 11650, *Performance of refrigerant recovery and/or recycling equipment*

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

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*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN