



SLOVENSKI STANDARD

SIST EN 13313:2004

01-september-2004

Hladilne naprave in toplotne črpalke – Strokovna usposobljenost osebja

Refrigerating systems and heat pumps - Competence of personnel

Kälteanlagen und Wärmepumpen - Sachkunde von Personal

Systemes de réfrigération et pompes à chaleur - Compétence du personnel

Ta slovenski standard je istoveten z: **EN 13313:2001**

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ICS:

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27.080	Toplotne črpalke	Heat pumps
27.200	Hladilna tehnologija	Refrigerating technology

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EUROPEAN STANDARD

EN 13313

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2001

ICS 27.080; 27.200

English version

**Refrigerating systems and heat pumps - Competence of
personnel**Systèmes de réfrigération et pompes à chaleur -
Compétence du personnelKälteanlagen und Wärmepumpen - Sachkunde von
Personal

This European Standard was approved by CEN on 12 November 2001.

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 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 Management Centre 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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EN 13313:2001 (E)

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Foreword

This European Standard has been prepared by Technical Committee CEN /TC 182, "Refrigerating systems and heat pumps 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of an identical text or by endorsement, at the latest by June 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

Annex A is informative. This European Standard also contains a Bibliography.

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.

Introduction

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Since refrigerating systems and equipment use refrigerants or heat transfer media which may have a detrimental effect on safety and/or environments, persons who manufacture and maintain such systems, check them and operate them are competent to carry out each task in accordance with this European Standard.

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EN 13313:2001 (E)**1 Scope**

This European Standard establishes procedures for achieving and assessing the competence of persons who design, construct, install, inspect, test and commission, maintain, repair, decommission and dispose of refrigerating systems and heat pumps with respect to health, safety, environmental protection and energy conservation requirements.

This European Standard does not apply to those persons who carry out work on the basis of instructions if they are supervised by a competent person or operating the system according to the operation manuals or who carry out work that does not affect the refrigerant circuit.

This European Standard does not apply to persons carrying out work in a manufacturing process (from the initial design of the product to the complete manufacture of the product) provided the process is controlled and the methods used are checked by a competent person.

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 (including amendments).

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.*

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

EN 378-4, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 4: Operation, maintenance, repair and recovery.*

3 Terms and definitions

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

3.1 assessment

process by which the evidence generated, gathered and provided about a person is judged to determine competence

3.2 approved organisation (awarding body)

organisation which is recognised to assess competence and to award certificates (a proof of competence) recognizing the health, safety, environmental and energy conservation competence of persons working on refrigerating systems and heat pumps

NOTE General criteria for awarding bodies can be found in EN 45013.

3.3 competence

ability to perform safely and satisfactorily the activities within an occupation

NOTE With reference to this standard to be competent means to have the knowledge and/or skill to perform the task(s) under consideration, so that a level according to this European Standard is achieved and simultaneously to possess the necessary insight into the relevant problems to understand why the task should be carried out in such a way.

4 General requirements

4.1 General

A company working in any field of refrigeration shall have competent personnel.

NOTE The company should have adequate equipment to enable the competent person to do the work.

4.2 Personnel

4.2.1 Persons responsible for design, construction, installation, inspection, testing and commissioning, maintenance, repair, decommissioning, and disposal of refrigerating systems and their parts shall be competent for their tasks with respect to health, safety, environmental protection and energy conservation purposes. This shall be proved.

4.2.2 The competence of persons who work on refrigerating systems shall be assessed according to 5.2 on their ability to demonstrate:

- a) good practice of the health, safety, environmental and energy conservation requirements of every refrigeration task undertaken that is covered by EN 378-1, EN 378-2, EN 378-3 and EN 378-4;
- b) sufficient relevant knowledge of health, safety and environmental legislation to carry out the tasks within their responsibility;
- c) sufficient knowledge of basic refrigeration theory to carry out the tasks within their responsibility.

NOTE Competence can also be restricted to one or more of the applications indicated in 4.2.1.

- d) the design and development activities shall be assigned to qualified personnel equipped with adequate resources.
- e) personnel performing specific assigned tasks shall be qualified on the basis of appropriate training and/or experience, as required. Appropriate records of training shall be maintained. This standard should provide the option of including specific requirements for competence in the quality system to demonstrate compliance with the standard.

5 Requirements for training, assessment and maintenance of competence

5.1 Competence training

Training of persons to achieve competence in safety aspects of refrigerating systems, environmental and energy conservation requirements shall be governed by national schemes. If such schemes do not exist, annex A can be applied.

5.2 Competence assessment

The competence of a person shall be assessed preferably by an approved organisation.

The certification of competence shall be as required by national regulations. If no national regulations or procedures exist, the methods of training and assessment set out in annex A can be used.

NOTE Some aspects of a person's competence may need to be reassessed on a regular basis.

5.3 Maintenance of competence

Persons shall maintain their competence as appropriate e.g. by the study of relevant literature, practical work.

Annex A (informative)

Competence training

A.1 General

If required by legislation or because industry consider it desirable a certification scheme may be implemented. Should such a scheme be needed this annex suggests methods by which a certification scheme may be achieved. These may be used if there are no other legislation or industry requirements.

A.2 Terms and definitions

For the purposes of this annex the following terms and definitions apply:

A.2.1

qualification

evidence of a certain level of training, professional knowledge, skill and experience

A.2.2

certification

procedure used to demonstrate the qualification of personnel at a level and leading to the issue of a certificate

A.2.3

certificate

document issued under the rules of the assessment system defined in this annex indicating that the named person is competent to deal with applicable health, safety, environmental protection and energy conservation requirements for refrigerating systems and heat pumps

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A.3 Training for competence

A.3.1 Categories of competent persons

A.3.1.1 General

The training for competence may be achieved by being classified at one of the three following categories depending on the duties:

- category A: e.g. maintenance personnel;
- category B: e.g. installation personnel, repair personnel;
- category C: e.g. designers, commissioning personnel, inspectors.

A.3.1.2 Category A

A person with competence in category A should be able to maintain a refrigerating system safely with due regard to environmental requirements and energy efficiency without breaking into the refrigerant circuit.

A.3.1.3 Category B

A person with competence in category B:

- should understand and be able to apply given specifications and piping and instrument diagrams (P & I);
- should understand and be able to apply requirements in standards concerning health, safety, environmental protection and energy efficiency;
- should understand and in a practical manner be able to apply safety measures for different refrigerants.

A.3.1.4 Category C

A person with competence in category C:

- should be competent to ensure that a refrigerating system conforms to the requirements in EN 378-1, EN 378-2, EN 378-3 and EN 378-4 concerning health, safety, environmental protection and energy conservation;
- should have advanced knowledge of legislation and regulations relating to refrigerating systems and heat pumps;
- should be able to develop and check piping and instrument diagrams (P & I), instructions, manuals etc.;
- should be able to give instructions in safety measures for the used refrigerants etc.

A.3.2 Training for competence

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A.3.2.1 General

Each person should comply with the minimum requirements for theoretical knowledge and practical experience as follows:

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- training for category A : see A.3.2.2;
- training for category B : see A.3.2.3;
- training for category C : see A.3.2.4.