

## საქართველოს სტანდარტი

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წნევის მოწყობილობა გაცივების სისტემებისა და სითბური ტუმბოებისთვის -  
ნაწილი 1: ჭურჭელი - ზოგადი მოთხოვნები

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English Version

## Pressure equipment for refrigerating systems and heat pumps - Part 1: Vessels - General requirements

Équipements sous pression pour systèmes de réfrigération et pompes à chaleur - Partie 1 : Récipients - Exigences générales

Druckgeräte für Kälteanlagen und Wärmepumpen - Teil 1: Behälter - Allgemeine Anforderungen

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (EN 14276-1:2020) 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of an identical text or by endorsement, at the latest by August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.

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

This document will supersede EN 14276-1:2006+A1:2011.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

EN 14276, *Pressure equipment for refrigerating systems and heat pumps*, is currently composed with the following parts:

- *Part 1: Vessels – General requirements;*
- *Part 2: Piping – General requirements.*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

## Introduction

This document recognizes the unique nature of vessels for refrigerating systems or heat pumps and is intended to address the specific needs of the refrigeration and heat pump industry. This document should be read in conjunction with the various parts of the EN 13445 series.

When the text of this document modifies or supplements a clause within the EN 13445 series, then this document should prevail. Where this document does not modify or supplement the requirements of a clause, the requirements of the EN 13445 series should prevail.

The unique nature of a refrigerating system is defined as follows:

- a) the purpose of the refrigerating system is to extract and reject heat (this involves both cooling and heating);
- b) to operate the refrigerating system a pressure-imposing element (e.g. a compressor or an energy source) is necessary;
- c) the refrigerating system has a defined refrigerant charge in a closed circuit;
- d) the refrigerant has a chemical composition and purity defined in the relevant standards;
- e) the pressure of the refrigerant decreases when the temperature decreases (see typical curve in Annex A of this document);
- f) due to the maximum temperature limit of 200 °C and the maximum pressure limit of 160 bar, the time dependant creep and fatigue due to pressure variation or vibrations are not significant design factors except for some materials such as aluminium, copper and titanium where the fatigue should be taken into account;
- g) the risk of overpressure is due to:
  - 1) the pressure imposing element;
  - 2) an external heat source (e.g. fire or hot water);
  - 3) improper operation.
- h) the refrigerating system is designed to minimize refrigerant emissions and the ingress of contaminants.

Hermetic compressors are covered by this document.