

**Toidutöötlemismasinad. Kogutud piima jahutid farmides.  
Valmistamise, jõudluse, kasutuskõlbulikkuse, ohutuse ja  
hügieeninõuded KONSOLIDEERITUD TEKST**

Food processing machinery - Bulk milk coolers on farms -  
Requirements for construction, performance, suitability for  
use, safety and hygiene CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13732:2003+A2:2009 sisaldab Euroopa standardi EN 13732:2002+A2:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 29.05.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 08.04.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13732:2003+A2:2009 consists of the English text of the European standard EN 13732:2002+A2:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 29.05.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 08.04.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võttesõnad:** containers, hazards, hygiene, inspection, milk, operating requirements, performance testing, performance tests, production, refrigerating plant, safety, safety requirements, specifications, storage, tank cooling equipment, tanks, tanks (containers), testing

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English Version

**Food processing machinery - Bulk milk coolers on farms -  
Requirements for construction, performance, suitability for use,  
safety and hygiene**

Machines pour les produits alimentaires - Refroidisseurs de  
lait en vrac à la ferme - Prescriptions pour la construction,  
les performances, l'aptitude à l'emploi, la sécurité et  
l'hygiène

Nahrungsmittelmaschinen - Behältermilchkühlanlagen für  
Milcherzeugerbetriebe - Anforderungen für Konstruktion,  
Leistung, Gebrauchstauglichkeit, Sicherheit und Hygiene

This European Standard was approved by CEN on 26 August 2002 and includes Amendment 1 approved by CEN on 24 June 2005 and Amendment 2 approved by CEN on 7 March 2009.

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 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 Management Centre has the same status as the official versions.

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



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## Foreword

This document (EN 13732:2002+A2:2009) has been prepared by Technical Committee CEN/TC 153 "Machinery intended for use with foodstuffs and feed", 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 October 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2005-06-24 and Amendment 2, approved by CEN on 2009-03-07.

This document supersedes EN 13732:2002.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1** and **A2** **A2**.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directives.

**A2** For relationship with the EU Directives, see informative Annexes ZA and ZB, which are integral parts of this document. **A2**

In this European Standard the annexes A, B, C, D and E are normative.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## Introduction

This document is a type C standard as stated in EN 1070:1998.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

## 1 Scope

**1.1** This European Standard specifies requirements for design, construction, performance, suitability for use, safety and hygiene of refrigerated bulk bovine milk coolers and the related methods of test.

It applies to refrigerated bulk milk tanks with air cooled condensing units and automatic control intended for installation on farms or at milk collecting points. It applies to tanks for two milkings (24 h), four milkings (48 h) and six milkings (72 h), in which the cooling takes place totally or partially within the tank.

Performance requirements in 5.4.1.2.1 and 5.4.1.2.2 do not apply to tanks where cooling does not take place totally within the tank nor where the tank is associated with a continuous system of milking (e.g. milking with robot).

**1.2** This European Standard does not cover:

- mobile tanks;
- tanks intended to be tilted for drainage;
- equipment for delivering the milk to the tank;
- equipment for pre-cooling or instant cooling of the milk.

**1.3** This standard covers significant hazards at machines falling within this scope when used as intended by the manufacturer and as identified by risk assessment (see EN 1050:1997).

Noise is not considered to be a significant hazard for bulk milk coolers. This standard includes information in 7.1 and in annex A concerning the manufacturer's declaration of the noise emission level of the cooler.

**1.4** This standard does not cover the calibration requirements for the tank to be used as a system for payment purpose.

**1.5** This standard applies primarily to the machines which are manufactured after its date of issue.

## 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 292-1:1991, *Safety of machinery - Basic concepts, general principles for design – Part 1: Basic terminology, methodology. (Identical with ISO/DIS 12100-1:2000)*

EN 292-2:1991, *Safety of machinery - Basic concepts, general principles for design – Part 2: Technical principles and specifications. (Identical with ISO/DIS 12100-2:2000)*

EN 378-1:2000, *Refrigerating systems and heat pumps - Safety and environmental requirements – Part 1: Basic requirements, definitions, classification and selection criteria.*

EN 378-2:2000, *Refrigerating systems and heat pumps - Safety and environmental requirements – Part 2: Design, construction, testing, marking and documentation.*

EN 378-3:2000, *Refrigerating systems and heat pumps - Safety and environmental requirements – Part 3: Installation site and personal protection.*

EN 378-4:2000, *Refrigerating systems and heat pumps - Safety and environmental requirements – Part 4: Operation, maintenance, repair and recovery.*

EN 1005-3:2002, *Safety of machinery - Human physical performance – Part 3: Recommended force limits for machinery operation.*

EN 1070:1998, *Safety of machinery - Terminology.*

EN 1088:1995, *Safety of machinery – Interlocking devices associated with guards – Principles for design and selection.*

EN 1672-2:1997, *Food processing machinery - Basic concepts – Part 2: Hygiene requirements.*

EN 10088-2, *Stainless steels – Part 2: Technical delivery conditions for sheet/plate and strip for general purposes.*

EN 50087:1993, *Safety of household and similar electrical appliances, particular requirements for bulk milk coolers.*

EN 60204-1:1997, *Safety of machinery - Electrical equipment of machines – Part 1: General requirements (IEC 60204-1:1997).*

EN 60529:1991, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989).*

EN 60947-2:1995, *Low voltage switch gear and control gear – Part 2: Circuit-breakers (IEC 60947-2:1995).*

EN ISO 3744:1995, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane (ISO 3744:1994).*

EN ISO 4287, *Geometrical product specifications (GPS) – Surface texture: profile method – Terms, definitions and surface texture parameters (ISO 4287:1997).*

EN ISO 4871, *Acoustics – Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996).*

EN ISO 11201, *Acoustics – Noise emitted by machinery and equipment – Measurement of emission sound pressure levels at a work station and at other specified positions – Engineering method in an essentially free field over a reflecting plane (ISO 11201:1995).*

ISO 2446:1976, *Milk - Determination of fat content (Routine method).*

ISO 2852, *Stainless steel clamp pipe couplings for the food industry.*

ISO 2853, *Stainless steel threaded couplings for the food industry.*