

**Toidutöötlemismasinad. Piruka- ja  
tordimasinad. Ohutus- ja  
hügieeninõuded**

Food processing machinery - Pie and tart machines  
- Safety and hygiene requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13390:2002 sisaldab Euroopa standardi EN 13390:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 12.07.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13390:2002 consists of the English text of the European standard EN 13390:2002.</p> <p>This document is endorsed on 12.07.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies safety and hygienic design requirements for the manufacture of machines used for the production of pies, tarts, pasties, en croute products and other similar items where the pastry cases are formed by the closing under pressure of one or more forming heads.</p>	<p><b>Scope:</b></p> <p>This standard specifies safety and hygienic design requirements for the manufacture of machines used for the production of pies, tarts, pasties, en croute products and other similar items where the pastry cases are formed by the closing under pressure of one or more forming heads.</p>
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**Võtmesõnad:** human factors engineering, instructions, mechanical en, noise measurements, operating instructions, pies, provision industry, safety, safety engineering, safety measures, safety requirements, specification (approval), specifications, testing, user information

ICS 67.260

English version

## Food processing machinery - Pie and tart machines - Safety and hygiene requirements

Machines pour les produits alimentaires - Fonceuses à tartes - Prescriptions relatives à la sécurité et à l'hygiène

Nahrungsmittelmaschinen - Tortelettmaschinen - Sicherheits- und Hygieneanforderungen

This European Standard was approved by CEN on 11 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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 153 "Food processing machinery", 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 2002, and conflicting national standards shall be withdrawn at the latest by August 2002.

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 EC Directive(s).

For the relationship with EC Directives, see informative annex ZA, which is an integral part of this standard.

The annexes A and B 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 0 Introduction

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

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

This standard specifies safety and hygienic design requirements for the manufacture of machines used for the production of pies, tarts, pasties, en croute products and other similar items where the pastry cases are formed by the closing under pressure of one or more forming heads. The standard applies to the following three basic types of machine :

- machines where operators hands enter hazard zone 1 (see 4.1) at each cycle ;
- machines which are loaded outside hazard zone 1 ;
- automatic machines.

Figure 1, 2 and 3 illustrate examples of these.

Automatic loading devices are not covered by this standard.

This standard applies to electrically, pneumatically and hydraulically powered machines. Manually operated machines are excluded from the scope of this standard.

Clause 4 lists the significant hazards identified on these machines on the basis of a risk assessment carried out following the principles in EN 1050:1996.

The safety and hygiene requirements take into account the hazards arising from use (including setting, process changeover, operation), cleaning and maintenance. Hazards arising from foreseeable misuse (3.12, EN 292-1:1991) are also included.

Flour dust is not a significant hazard at pie and tart machines.

A noise test code is included in annex B to assist manufacturers to measure noise level for the purpose of the noise emission declaration.

This document is not applicable to pie and tart machines which are manufactured before the date of publication of this document by CEN.

## 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.*

EN 292-2:1991 + A1:1995, *Safety of machinery - Basic concepts - General principles for design - Part 2: Technical principles and specifications.*

EN 294:1992, *Safety of machinery - Safety distances to prevent danger zones being reached by the upper limbs.*

EN 349:1993, *Safety of machinery - Minimum gaps to avoid crushing of parts of the human body.*

EN 563:1994, *Safety of machinery - Temperatures of touchable surfaces - Ergonomics data to establish temperature limit values for hot surfaces.*

EN 614-1:1995, *Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles.*

EN 953:1997, *Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards.*

EN 954-1:1996, *Safety of machinery - Safety related parts of control systems - Part 1: General principles for design.*

EN 982:1996, *Safety of machinery - Safety requirements for fluid power systems and their components – Hydraulics.*

EN 983:1996, *Safety of machinery - Safety requirements for fluid power systems and their components – Pneumatics.*

EN 1050:1996, *Safety of machinery – Principles for risk assessment.*

EN 1070, *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 60204-1:1997, *Safety of machinery - Electrical equipment of machines - Part 1 : General requirements (IEC 60204-1:1997).*

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

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

EN ISO 11688-1:1998, *Acoustics – Recommended practice for the design of low-noise machinery and equipment - Part 1: Planning (ISO/TR 11688-1:1995)*.

EN ISO 12001:1996, *Acoustics - Noise emitted by machinery and equipment – Rules for the drafting and presentation of a noise test code (ISO 12001:1996)*.

### 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1070 and the following terms and definitions apply.

#### 3.1

##### **platform**

mould into which the die presses, which is mounted on a supporting surface (see Figure 2)

#### 3.2

##### **platen**

mould into which the die presses, which is integral with the supporting surface

#### 3.3

##### **die**

shaped tool for pressing the pastry into the desired shape with the corresponding platform or platen. It can be heated

#### 3.4

##### **false table**

device, shaped and dimensioned to fill the openings between the platforms on a rotating table machine through which access to hazard zone 1 may be gained (see Figure 6)

#### 3.5

##### **table frame**

series of radial webs, located between platforms, shaped and dimensioned to close the gap between the lower edge of the guard and the upper surface of the rotating table on which the platforms are located (see Figure 5)

#### 3.6

##### **blocking**

forming the pastry base