

**Kummi- ja plastitöötlusmasinad. Lintnoad  
vahtplastitahvlite lõikamiseks. Ohutusnõuded**

Plastics and rubber machines - Bandknife cutting  
machines for block foams - Safety requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14886:2008 sisaldab Euroopa standardi EN 14886:2008 ingliskeelset teksti.

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English Version

## Plastics and rubber machines - Bandknife cutting machines for block foams - Safety requirements

Machines pour les matières plastiques et le caoutchouc -  
Machines de coupe à couteau ruban pour blocs de mousse  
- Prescriptions de sécurité

Kunststoff- und Gummimaschinen -  
Bandmesserschneidmaschinen für Blockschaum -  
Sicherheitsanforderungen

This European Standard was approved by CEN on 12 January 2008.

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## Contents

Page

Foreword.....	4
Introduction .....	5
<b>1</b> <b>Scope .....</b>	<b>6</b>
<b>2</b> <b>Normative references .....</b>	<b>7</b>
<b>3</b> <b>Terms and definitions .....</b>	<b>8</b>
<b>4</b> <b>List of significant hazards .....</b>	<b>10</b>
4.1 <b>General hazards on bandknife cutting machines.....</b>	<b>10</b>
4.1.1 <b>General.....</b>	<b>10</b>
4.1.2 <b>Mechanical hazards .....</b>	<b>10</b>
4.1.3 <b>Electrical hazards .....</b>	<b>10</b>
4.1.4 <b>Hazards due to failure of the control system.....</b>	<b>10</b>
4.1.5 <b>Hazards generated by noise .....</b>	<b>10</b>
4.1.6 <b>Fire hazard generated by flying sparks while grinding the bandknife.....</b>	<b>10</b>
4.1.7 <b>Hazard due to inhalation of harmful dusts created by cutting .....</b>	<b>10</b>
4.2 <b>Additional hazards or general hazards which require particular protective measures on manual bandknife cutting machines.....</b>	<b>11</b>
4.2.1 <b>Vertical bandknife cutting machines (Figure 1).....</b>	<b>11</b>
4.2.2 <b>Tilting bandknife cutting machines (Figure 2 and Figure 3) .....</b>	<b>11</b>
4.3 <b>Additional hazards or general hazards which require particular protective measures on automatic bandknife cutting machines .....</b>	<b>11</b>
4.3.1 <b>Bandknife cutting machines with turntable (carousel) (Figure 4) .....</b>	<b>11</b>
4.3.2 <b>Vertical bandknife cutting machines with fixed table and movable cutting unit (Figure 5).....</b>	<b>12</b>
4.3.3 <b>Horizontal bandknife cutting machines.....</b>	<b>12</b>
4.3.4 <b>Horizontal bandknife cutting machines for block trimming.....</b>	<b>13</b>
4.3.5 <b>Vertical bandknife cutting machines for block trimming (Figure 13, Figure 14 and Figure 15).....</b>	<b>13</b>
4.3.6 <b>Contour cutting machines .....</b>	<b>13</b>
4.3.7 <b>Profile cutting and splitting machines (Figure 21 and Figure 22) .....</b>	<b>14</b>
4.3.8 <b>Compression cutting machines (Figure 23).....</b>	<b>14</b>
4.3.9 <b>Peeling machines (Figure 24).....</b>	<b>14</b>
4.3.10 <b>Cross-cutting machines (Figure 25, Figure 26, Figure 27 and Figure 28).....</b>	<b>15</b>
<b>5</b> <b>Safety requirements and/or protective measures .....</b>	<b>15</b>
5.1 <b>General requirements and/or measures for bandknife cutting machines .....</b>	<b>15</b>
5.1.1 <b>General.....</b>	<b>15</b>
5.1.2 <b>Mechanical hazards .....</b>	<b>16</b>
5.1.3 <b>Electrical hazards .....</b>	<b>17</b>
5.1.4 <b>Hazards due to failure of the control system.....</b>	<b>17</b>
5.1.5 <b>Hazards generated by noise .....</b>	<b>18</b>
5.1.6 <b>Fire hazard generated by flying sparks while grinding the bandknife.....</b>	<b>18</b>
5.1.7 <b>Hazard due to inhalation of harmful dusts created by cutting .....</b>	<b>18</b>
5.2 <b>Additional requirements and/or measures for manual bandknife cutting machines .....</b>	<b>19</b>
5.2.1 <b>Vertical bandknife cutting machines (Figure 1).....</b>	<b>19</b>
5.2.2 <b>Tilting bandknife cutting machines (Figure 2 and Figure 3) .....</b>	<b>21</b>
5.3 <b>Additional requirements and/or measures for automatic bandknife cutting machines.....</b>	<b>24</b>
5.3.1 <b>Bandknife cutting machines with turntable (carousel) (Figure 4) .....</b>	<b>24</b>
5.3.2 <b>Vertical bandknife cutting machines with fixed table and movable cutting unit (Figure 5).....</b>	<b>27</b>
5.3.3 <b>Horizontal bandknife cutting machines.....</b>	<b>30</b>
5.3.4 <b>Horizontal bandknife cutting machines for block trimming.....</b>	<b>39</b>
5.3.5 <b>Vertical bandknife cutting machines for block trimming (Figures 13, 14 and 15) .....</b>	<b>41</b>

5.3.6	Contour cutting machines .....	45
5.3.7	Profile cutting and splitting machines (Figure 21 and Figure 22) .....	53
5.3.8	Compression cutting machines (Figure 23) .....	57
5.3.9	Peeling machines (Figure 24).....	60
5.3.10	Cross-cutting machines (Figures 25, 26, 27 and 28) .....	62
6	Verification of safety requirements and/or protective measures .....	67
7	Information for use .....	72
7.1	Instruction handbook.....	72
7.1.1	General .....	72
7.1.2	General information for all bandknife cutting machines.....	72
7.1.3	Additional information for particular bandknife cutting machines .....	73
7.2	Marking.....	73
Annex A	(normative) Noise test code .....	75
A.1	Introduction.....	75
A.2	Determination of the A-weighted emission sound pressure level at the operator's position.....	75
A.3	Determination of the A-weighted sound power level .....	75
A.4	Installation and mounting conditions for noise measurement.....	76
A.5	Operating conditions .....	76
A.6	Measurement uncertainty .....	76
A.7	Information to be recorded and reported.....	76
A.7.1	Information to be recorded.....	76
A.7.2	Information to be reported.....	76
A.8	Declaration and verification of noise emission values .....	77
Annex B	(normative) Prohibition sign: "No access" .....	78
Annex ZA	(informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC.....	79
Annex ZB	(informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC.....	80
Bibliography	.....	81

## Foreword

This document (EN 14886:2008) has been prepared by Technical Committee CEN/TC 145 "Plastics and rubber machines", the secretariat of which is held by UNI.

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 2008, and conflicting national standards shall be withdrawn at the latest by August 2008.

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 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 98/37/EC and 2006/42/EC.

For relationship with EU Directives, see informative Annex ZA and ZB, which are an integral part of this document.

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 the United Kingdom.

## Introduction

This European Standard is a type C standard as stated in EN ISO 12100-1.

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

For the machines which are covered by the scope of this type C standard and which have been designed and built in accordance with the provisions of this standard, the provisions of this type C standard will take precedence over the provisions of any other type B standard.

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## 1 Scope

This European standard applies to machines that are designed specifically to cut, split or peel block foams to commercially required shapes, using a single or double cut.

All hazards listed in clause 4 are covered by this document.

Cutting of block foams may be by:

- vertical cutting;
- horizontal cutting;
- inclined cutting;
- transverse cutting;
- contour cutting; or
- a combination of the above.

The material to be cut may be supported or transported by:

- a fixed table;
- a shuttle table;
- a conveyor;
- a turntable;
- rollers;
- mandrel; or
- a combination of the above.

Cutting can be either manual or automatic.

Cutting tools can be:

- smooth-edged or toothed bandknives;
- cutting wires.

Movement of the cutting tool can be either oscillating or continuous in one direction.

This European Standard does not apply to:

- laser and water jet cutting;
- hot wire cutting;
- wood, metal and food cutting machines.

The safety requirements for the additional hazards arising from the interaction between bandknife cutting machines and ancillary equipment, especially loading and unloading devices, are specified. The safety requirements for the ancillary equipment itself are not specified.

This European Standard covers machines used for cutting plastics and rubber having a cellular or compact structure. However, it may also be applied when these machines are used for cutting other materials, for example textiles, fibres and mineral wool, if cutting these materials does not create additional hazards.

This document is not applicable to bandknife cutting machines manufactured before the date of its publication as an EN.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

EN 811, *Safety of machinery - Safety distances to prevent danger zones being reached by the lower limbs*

EN 894-1, *Safety of machinery - Ergonomics requirements for the design of the displays and control actuators - Part 1: General principles for human interactions with displays and control actuators*

EN 894-2, *Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 2: Displays*

EN 894-3, *Safety of machinery - Ergonomics requirements for the design of displays and control actuators - Part 3: Control actuators*

EN 953, *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 1760-2, *Safety of machinery - Pressure sensitive protective devices - Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*

EN 1760-3, *Safety of machinery - Pressure sensitive protective devices - Part 3: General principles for the design and testing of pressure sensitive bumpers, plates, wires and similar devices*

EN 12413, *Safety requirements for bonded abrasive products*

EN 13236, *Safety requirements for superabrasives*

EN 60204-1:2006, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2005, modified)*

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

EN 61310-1, *Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, auditory and tactile signals (IEC 61310-1:1995)*

EN 61310-2, *Safety of machinery - Indication, marking and actuation - Part 2: Requirements for marking (IEC 61310-2:1995)*

EN 61496-1:2004, *Safety of machinery – Electro-sensitive protective equipment – Part 1: General requirements and tests (IEC 61496-1:2004, modified)*

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 3746:1995, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746:1995)*

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 11202:1995, *Acoustics – Noise emitted by machinery and equipment – Measurement of emission sound pressure levels at the work station and at other specified positions – Survey method in situ (ISO 11202:1995)*

EN ISO 12100-1, *Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery - Basic concepts, general principles for design – Part 2: Technical principles (ISO 12100-2:2003)*

EN ISO 13850, *Safety of machinery - Emergency stop - Principles for design (ISO 13850:2006)*

### **3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.

#### **3.1**

##### **manual cutting machine**

cutting machine on which the material to be cut, or the table on which it is placed, is moved by the force applied by the operator

#### **3.2**

##### **automatic cutting machine**

cutting machine where cutting is achieved without force being applied by the operator

#### **3.3**

##### **tilting cutting machine**

cutting machine where the bandknife can make either a vertical or an inclined cut

#### **3.4**

##### **side guide**

vertical or inclined surface, against which the material to be cut is supported

#### **3.5**

##### **grinding unit**

machine subassembly for sharpening the bandknife