

**Toidutöötlemismasinad. Koorimis-,
nülgimis- ja kilekõrvaldamismasinad.
Ohutus- ja hügieeninõuded**

Food processing machinery - Derinding-, skinning-
and membrane removal machines - Safety and
hygiene requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12355:2003 sisaldab Euroopa standardi EN 12355:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 15.04.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12355:2003 consists of the English text of the European standard EN 12355:2003.</p> <p>This document is endorsed on 15.04.2003 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>Käsitlusala:</p> <p>This European standard applies to design, manufacturing, installation, transportation, electrical equipment and cleaning of derinding, skinning, and membrane removal machines (see figures 1 to 5). The machines described in this standard are used for derinding, skinning and membrane removal of meat and fish by cutting at a blade device</p>	<p>Scope:</p> <p>This European standard applies to design, manufacturing, installation, transportation, electrical equipment and cleaning of derinding, skinning, and membrane removal machines (see figures 1 to 5). The machines described in this standard are used for derinding, skinning and membrane removal of meat and fish by cutting at a blade device</p>
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Võtmesõnad: definitions, fish processing, fishes, foodstuff machine, game, hazards, hygiene, marking, meat, meat processing, mechanical engineering, processing machines, provision industry, safety requirements, slabbing machine, specification (approval), specifications, types

ICS 67.260

English version

**Food processing machinery - Derinding-, skinning- and
membrane removal machines - Safety and hygiene
requirements**

Machines pour les produits alimentaires - Machines à
découper, éplucher et peler - Prescriptions relatives à la
sécurité et à l'hygiène

Nahrungsmittelmaschinen - Entschwartungs-, Enthäutungs-
und Entvliesmaschinen - Sicherheits- und
Hygieneanforderungen

This European Standard was approved by CEN on 21 November 2002.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 12355:2003) has been prepared by Technical Committee CEN/TC 153 "Food processing machinery - Safety and hygiene specifications", 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 2003, and conflicting national standards shall be withdrawn at the latest by August 2003.

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 Directive(s).

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

It is one of a series of standards for meat processing machinery, in compliance with EN 1672-2 and annex C.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This European Standard relates to:

- derinding machines with tooth roll, hold down roller and blade device;
- skinning- and membrane removal machines with transport- and stripper roll as well as a blade device.

1 Scope

1.1 This European Standard applies to design, manufacturing, installation, transportation, electrical equipment and cleaning of derinding-, skinning-, and membrane removal machines (see Figures 1 to 5).

The machines described in this standard are used for derinding-, skinning- and membrane removal of meat and fish by cutting at a blade device.

Derinding-, skinning-, and membrane removal machines for domestic purposes and table-top machines are not covered by this standard.

This standard only applies to machines which are manufactured after the date of issue of this standard.

1.2 This standard covers the following types of machines:

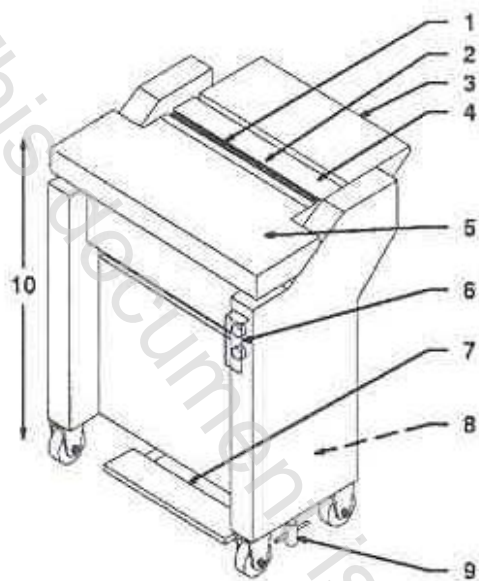
- Open derinding machines with infeed table and a distance between the floor and the surface of the infeed table from 800 mm to 1 050 mm.

Tooth form of the tooth roll:

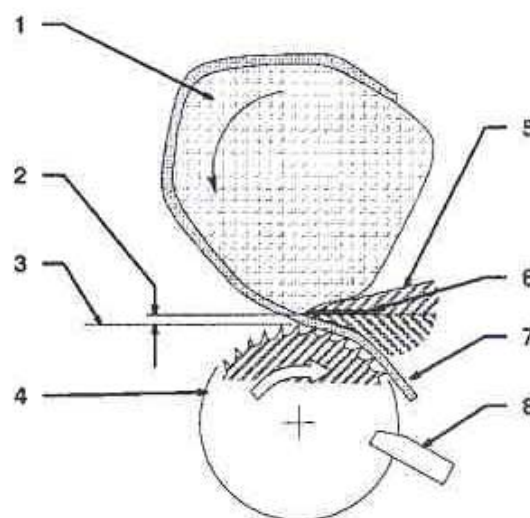
Depth ≤ 5,0 mm

Pitch ≤ 6,5 mm

(see Figures 1 and 2)

**Key**

1	Tooth roll/ Transport roll	6	ON/OFF Switch, cover
2	Blade	7	Foot switch
3	Discharge table	8	Drive
4	Blade holder	9	Locking device
5	Infeed table	10	Table height

Figure 1 — Derinding-, skinning- and membrane removal machine**Key**

1	Round product	4	Tooth roll
2	Cutting thickness ≤ 5 mm	5	Blade holder
3	Infeed table	6	Blade
		7	Rind
		8	Stripper comb

Figure 2 — System of an open derinding machine

— Automatic derinding machine with infeed, hold down, and outfeed device and a distance between the floor and the surface of the infeed device, e.g. conveyor belt between 800 mm and 1 050 mm.

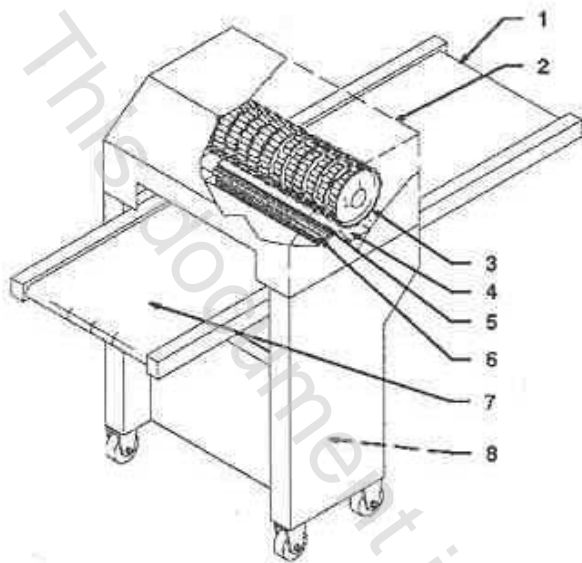
Tooth form of the tooth roll:

Depth $\leq 5,0$ mm

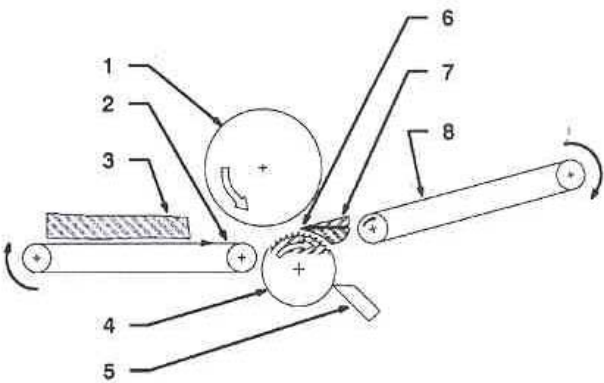
Pitch $\leq 12,0$ mm

Hold down roller diameter 175 mm to 240 mm.

(see Figures 3 and 4)



Key	
1	Outfeed conveyor belt
2	Mobile guard
3	Hold-down rollers
4	Blade holder
5	Blade
6	Tooth or conveyor roll
7	Infeed conveyor
8	Drive



Key	
1	Hold-down rollers
2	Infeed conveyor belt
3	Product
4	Tooth or conveyor roll
5	Stripper comb or stripper roll
6	Blade
7	Blade holder
8	Outfeed conveyor

Figure 3 — Automatic Derinding- and membrane removal machine

Figure 4 — System of an automatic derinding- and membrane machine

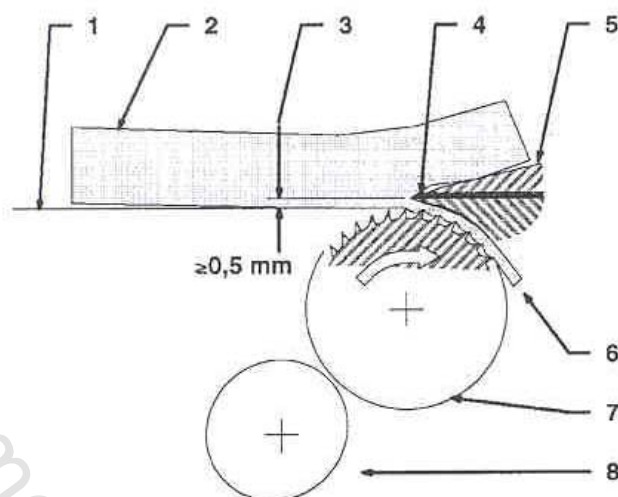
— Open skinning- and membrane removal machine with infeed table and a distance between the floor and the surface of the infeed table between 800 mm and 1 050 mm.

Groove form of the transport roller:

Depth ≤ 2,0 mm

Pitch ≤ 2,5 mm

(see Figures 1 and 5)

**Key**

1	Infeed table	5	Blade holder
2	Product	6	Membrane
3	Cutting	7	Transport roll
	Thickness $\leq 0,5$ mm	8	Stripper roll
4	Blade		

Figure 5 — System of a membrane removal machine

Derinding-, skinning- and membrane removal machines consist mainly of a machine frame, tooth roll with stripper comb, hold down roller with stripper rake, transport roll with stripper roll and air jet cleaning blade device and electrical, electronic, or pneumatic components, depending on the machine type.

Derinding-, skinning- and membrane removal machines can e.g. be equipped with a:

- infeed and outfeed table;
- infeed- and outfeed conveyor belts;
- blade device;
- double blade;
- hold down device, (e.g. hold down rollers, belts or fingers);
- circular knives inside or instead of hold down rollers;
- stripper comb/stripper roll/stripper rake.

Derinding-, skinning- and membrane removal machines can be mobile (see Figures 1 and 3).

1.3 Intended use

The intended uses of the machines are described in clause 7 of this standard, Information for use.

The product (raw meat or raw fish) with a weight < 15 kg which is to be processed is either fed by hand or by an infeed device (e.g. infeed conveyor belt) and a hold down device carried to the tooth or transport roller. Using open derinding-, skinning- and membrane removal machines, the product is pressed by hand against the blade device and the rind, the skin or the membrane is cut off by the blade.

1.4 Not intended use

A not intended use is e.g.:

- the wrong installation of a derinding-, skinning- and membrane removal machine;
- the processing of flat products on open derinding machines;
- working on open derinding-, skinning- and membrane removal machines without using the gloves which the manufacturer recommends;
- manipulation of interlocking systems on safety devices;
- using of cleaning- and disinfection detergents, which are not recommended by the manufacturer in the instructions for use.

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 292-2:1991, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles and specifications.*

EN 614-1, *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 1005-1, *Safety of machinery – Human physical performance – Part 1: Terms and definitions.*

prEN 1005-2, *Safety of machinery – Human physical performance – Part 2: Manual handling of machinery and component parts of machinery.*

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

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 61000-6-1, *Electromagnetic compatibility (EMC) – Part 6-1: Generic standards; Immunity for residential, commercial and light-industrial environments (IEC 61000-6-1:1997, modified).*

EN 61000-6-2, *Electromagnetic compatibility (EMC) – Part 6-2: Generic standards; Immunity for industrial environments (IEC 61000-6-2:1999, modified).*

EN 61000-6-3, *Electromagnetic compatibility (EMC) – Part 6-3: Generic standards; Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3:1996, modified).*

EN 61000-6-4, *Electromagnetic compatibility (EMC) – Part 6-4: Generic standards; Emission standard for industrial environments (IEC 61000-6-4:1997, modified).*

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

EN 61496-1:1997, *Safety of machinery – Electro-sensitive protective equipment – Part 1: General requirements and tests (IEC 61496-1:1997).*

EN ISO 4287:1998, *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 11204:1995, *Acoustics – Noise emitted by machinery and equipment – Measurement of emission sound pressure levels at a work station and at other specified positions – Method requiring environmental corrections (ISO 11204:1995).*

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

3 Terms and definitions

For the purposes of this European Standard and in addition to the terms and definitions given in the standards which are listed in clause 2, the following terms and definitions apply.

3.1

strip

mechanical process for stripping off skin or membrane from rotating machine parts

3.2

stripper comb

comb-shaped insert in the tooth roll for the stripping

3.3

stripper rake

rake-shaped insert engaged between the hold-down rollers of the hold-down device for stripping

3.4

stripper roll

shaft with teeth to strip skin or membrane off the transport roller

3.5

hold down device

rollers, conveyors or mechanical fingers to press down and move products

3.6

combination derinding and membrane removal machine

machine which can be used as open or automatic derinding- and membrane removal machine

3.7

double blade

two blade devices installed one above the other