SLOVENSKI STANDARD
SIST EN 13534:2006

01-maj-2006

Stroji za predelavo hrane – Stroji za konzerviranje z vbrizgavanjem – Varnostne in higienske zahteve

Food processing machinery - Curing injection machines - Safety and hygiene requirements

Nahrungsmittelmaschinen - Pökelspritzmaschinen - Sicherheits- und Hygieneanforderungen

Machines pour les produits alimentaires - Machines a injecter de la saumure - Prescriptions relatives a la sécurité et a l'hygiene

Ta slovenski standard je istoveten z: **EN 13534:2006**

ICS:

67.260	Tovarne in oprema za živilsko industrijo	Plants and equipment for the food industry

SIST EN 13534:2006 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13534

January 2006

ICS 67.260

English Version

Food processing machinery - Curing injection machines - Safety and hygiene requirements

Machines pour les produits alimentaires - Machines à injecter de la saumure - Prescriptions relatives à la sécurité et à l'hygiène

Nahrungsmittelmaschinen - Pökelspritzmaschinen - Sicherheits- und Hygieneanforderungen

This European Standard was approved by CEN on 21 November 2005.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 13534:2006: E

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Foreword

This European Standard (EN 13534:2005) 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of an identical text or by endorsement, at the latest by June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This European Standard 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 European Standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 ISO 12100-1.

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 standard applies for

— curing injection machines with infeed and outfeed devices;

— curing injection machines with infeed and outfeed devices and loading devices.

This standard does not apply to portable/hand guided curing injection devices.

This standard deals with all significant hazards, hazardous situations and events relevant to machines, appliances and machinery when they are used as intended and under the conditions foreseen by the manufacturer (see Clause 4).

This document deals with all significant hazards, hazardous situations and events relevant to curing injection machinery when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4).

This document is not applicable to curing injection machines which are manufactured before the date of publication of this document by CEN.

1.2 This standard covers the following types of curing injection machines:

Curing injection machines consist mainly of a single or multilane curing needle station, holding down clamp, infeed and outfeed devices, machine frame and related drive system, and electrical, electronic, or pneumatic components, depending on machine type.

Curing injection machines in the scope of this standard can be equipped with:

— infeed chute;

— splash guard flaps;

— single or multi-lane curing needle bars (needle station);

— holding down clamp;

— infeed and outfeed conveyor belt;

— infeed and outfeed rake;

— interlocked transport car at the outfeed side;

— loading device with delivery chute.

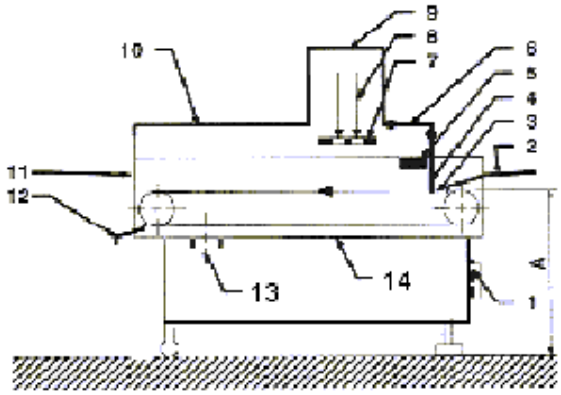
The product being processed (raw meat, game or raw fish) is fed by hand to the infeed device of the curing injection machine. The infeed device transports the product to the needle station; the product is then pressed against the infeed device by a holding down clamp. The needles of the needle station inject the curing liquid or other fluids into the product. The outfeed device then transports the product away from the needle station.

This standard also covers the loading devices, which can be necessary in the case of machines with high capacity and/or great height.

Curing injection machines in the scope of this standard can be stationary or mobile.

1.2.1 Curing injection machines with single or multi-lane curing needle bars, infeed and outfeed device at the infeed and outfeed side (see Figure 1).

The distance A between the floor/ standing position and the infeed surface of the infeed and outfeed device is > 750 mm.



KEY

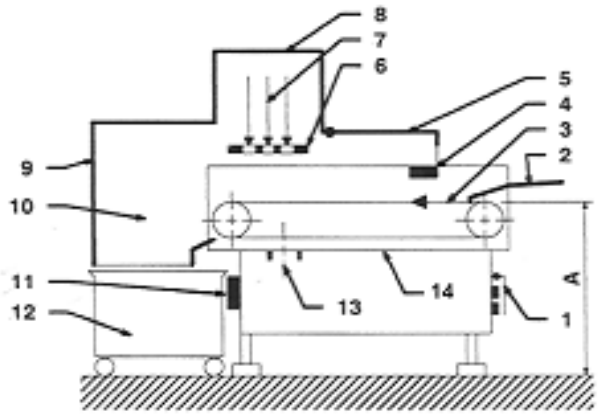
A > 750 mm

1	On/Off switch, hood	8	Needle bar
2	Infeed side	9	Housing
3	Infeed device	10	Guard cover
4	Splash guard flaps	11	Outfeed side/ outfeed device
5	Safety switch	12	Delivery chute
6	Guard cover, movable, interlocked	13	Curing liquid overflow
7	Holding down clamp	14	Bottom reservoir

Figure 1 — Construction of a curing injection machine with needle bar, holding down clamp, infeed and outfeed device

1.2.2 Curing injection machines with single or multi-lane curing needle bars, infeed and outfeed device at the infeed and outfeed side and an interlocked transport car at the outfeed side (see Figure 2).

The distance A between the floor/ standing position and the infeed surface of the infeed and outfeed device is > 750 mm.



KEY

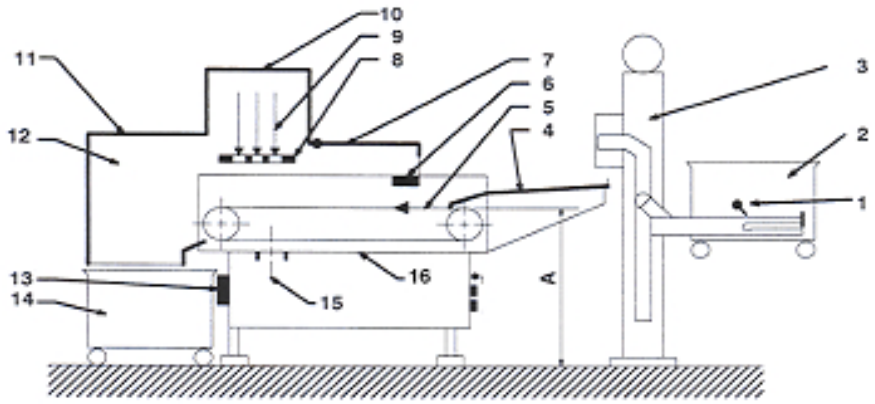
A > 750 m

1	On/Off switch, hood	8	Housing
2	Infeed side	9	Guard cover
3	Infeed and outfeed device	10	Outfeed side
4	Safety switch	11	Safety switch
5	Guard cover, moveable, interlocked	12	Transport car, interlocked
6	Holding down clamp	13	Curing liquid overflow
7	Needle bar	14	Bottom reservoir

Figure 2 —Construction of a curing injection machine with needle bar, holding down clamp, infeed and outfeed device and transport car

1.2.3 Curing injection machines with single or multi-lane curing needle bars, infeed and outfeed device at infeed and outfeed side and with a loading device (see Figure 3).

The distance A between the floor/ standing position and the upper side of the infeed and outfeed device is > 750 mm.



KEY

A > 750 mm

1	Locking device	8	Holding down clamp
2	Transport car	9	Needle bars
3	Loading device	10	Housing
4	Delivery chute	11	Guard cover
5	Infeed and outfeed device	12	Outfeed side/deloading conveyor
6	Safety switch	13	Safety switch
7	Guard cover, moveable, interlocked	14	Transport car, interlocked
		15	Curing liquid overflow
		16	Bottom reservoir

Figure 3 —Construction of a curing injection machine with needle bar, holding down clamp, infeed and outfeed device, transport car and loading device

1.3 Intended use

During the production of this standard the following assumptions were made:

— Curing injection machines are installed at a sufficient lighted place.

— They are used only by designated and skilled operators.

— Although it should be advised against, this standard, taking into account practice, deals with the hazards due to cleaning with pressurised water.

2 Normative references

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

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 moveable 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*

EN 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 1050, *Safety of machinery — Principles for risk assessment*

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

EN 1672-2:2005, *Food processing machinery — Basic concepts — Part 2: Hygiene requirements*

EN 13288, *Food processing machinery - Bowl lifting and tilting machines - Safety and hygiene requirements*

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

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

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

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 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)*

EN ISO 12100-1:2003, *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)*