SLOVENSKI STANDARD
oSIST prEN 13379:2016

01-julij-2016

Stroji za izdelavo testenin - Stroji za razvlačenje, valjanje in rezanje, transporter za vračanje palic - Varnostne in higienske zahteve

Pasta processing plant - Spreader, stripping and cutting machine, stick return conveyor - Safety and hygiene requirements

Maschinen zur Teigwarenherstellung - Behänger, Abstreif- und Schneidmaschinen, Stabrücktransporte, Stabmagazine - Sicherheits- und Hygieneanforderungen

Ta slovenski standard je istoveten z: **prEN 13379**

ICS:

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

oSIST prEN 13379:2016 **en,fr,de**

EUROPEAN STANDARD

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English Version

Pasta processing plant - Spreader, stripping and cutting machine, stick return conveyor - Safety and hygiene requirements

Maschinen zur Teigwarenherstellung - Behänger, Abstreif- und Schneidmaschinen, Stabrücktransporte, Stabmagazine - Sicherheits- und Hygieneanforderungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 153.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (prEN 13379:2016) 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 document is currently submitted to the CEN Enquiry.

This document will supersede EN 13379:2001+A1:2013.

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 2006/42/EC.

For relationship with EU Directive 2006/42/EC, see informative Annex ZA, which is an integral part of this document.

Introduction

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

The machinery concerned and the extent to which hazards, hazardous situations and hazardous 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.

Complementary to the hygiene requirements common to all food processing machines, specific requirements for cleanability and sanitation of the machines in the scope are formulated.

1 Scope

This draft European Standard applies to spreader, stripping and cutting machine, as well as the stick return conveyor (see Clause 4), used for pasta production.

This draft European standard specifies the safety requirements for the design, manufacture and information for safe use of spreader, stripping and cutting machines, as well as the stick return conveyor, classified as stationary units which cannot be moved when in operation.

It deals with all significant hazards, hazardous situations, and events when the machines falling within the scope of this standard are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 5).

It deals with the hazards during the following phases of the machines' lifetime: transport, assembly and installation, commissioning, setting and adjusting, operation, cleaning, fault finding, maintenance, decommissioning, dismantling, disabling and scrapping.

The measures for risk reduction are given in Clause 6.

This draft European Standard does not apply to:

— household machines,

— batch machines.

The significant hazards covered by this standard are listed in Clause 5.

These hazards and the measures for their reduction are described in this draft European Standard.

Ancillary equipment which is not an integral part of the machinery (e.g. hoppers) is not covered by this draft European Standard.

This draft European Standard is not applicable to machines in its scope which are manufactured before the date of its publication as EN.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 1037:1995+A1:2008, *Safety of machinery — Prevention of unexpected start-up*

EN 1672-2:2005+A1:2009, *Food processing machinery — Basic concepts — Part 2: Hygiene requirements*

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

EN 60529:1991+A2:2013[1)], *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

EN 60947-5-5, *Low-voltage switchgear and controlgear — Part 5-5: Control circuit devices and switching elements — Electrical emergency stop device with mechanical latching function (IEC 60947-5-5)*

1) This document is impacted by the amendments EN 60529:1991/A1:2000 and EN 60529:1991/A2:2013.

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

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

EN ISO 3744, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744)*

EN ISO 3746, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane (ISO 3746)*

EN ISO 3747, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering/survey methods for use in situ in a reverberant environment (ISO 3747)*

EN ISO 4287, *Geometrical product specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287)*

EN ISO 4413, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413)*

EN ISO 4414:2010, *Pneumatic fluid power — General rules and safety requirements for systems and their components (ISO 4414:2010)*

EN ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871)*

EN ISO 7731, *Ergonomics - Danger signals for public and work areas — Auditory danger signals (ISO 7731)*

EN ISO 9614-1, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points (ISO 9614-1)*

EN ISO 9614-2, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning (ISO 9614-2)*

EN ISO 11201, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO 11201)*

EN ISO 11202, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections (ISO 11202)*

EN ISO 11204, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions applying accurate environmental corrections (ISO 11204)*

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

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13732-1, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1)*

EN ISO 13849-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1)*

EN ISO 13850, *Safety of machinery — Emergency stop function — Principles for design (ISO 13850)*

EN ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*

EN ISO 14119, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection (ISO 14119)*

EN ISO 14120, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards (ISO 14120)*

EN ISO 14122 (all parts), *Safety of machinery — Permanent means of access to machinery (ISO 14122, all parts)*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 3864-2, *Graphical symbols — Safety colours and safety signs — Part 2: Design principles for product safety labels*

ISO 3864-3, *Graphical symbols — Safety colours and safety signs — Part 3: Design principles for graphical symbols for use in safety signs*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply.

3.1
spreader
machine collecting product from the press and spreading it on the sticks before the stick enters the dryer

3.2
stripping and cutting machine
machine collecting dried pasta sticks, releasing pasta from the sticks and cutting pasta to packaging length

3.3
stick return conveyor
machine collecting empty sticks from the stripping saw and conveying them to the spreader

3.4
continuous working machine
machine with non-stop product cycle, where the pre-formed pasta is fed automatically into the machine and the end product is extracted continuously

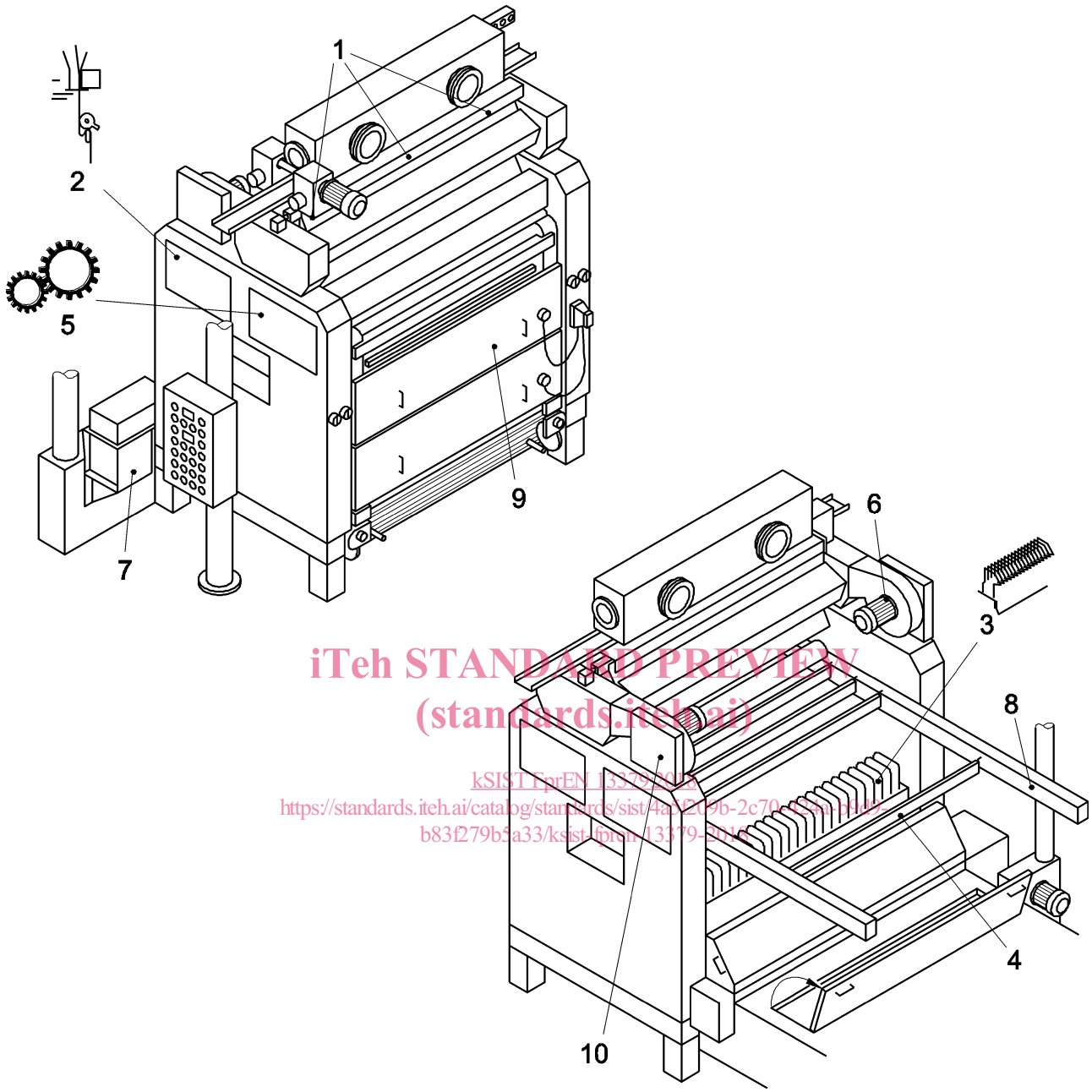
4 Descriptions

4.1 Spreader

The spreader (see Figure 1) is placed between the extruder and the dryer. The dough strings, continually discharged from the extruder, are cut off to a certain length, then placed on the sticks and cut to the required length on the lower end. Subsequently, the covered sticks are transferred to the dryer. The empty sticks are taken over from the stick return conveyor and can be heated or treated with edible oil before they are covered with product.

The cut product remnants are usually transported away from the spreader by means of conveyor belts and are fed to the extruder by means of a pneumatic conveying line. In order to prevent the still wet product on the sticks sticking together, it is necessary to have venting devices at several spots.

The spreader can also be equipped with a device for introducing or removing the sticks.



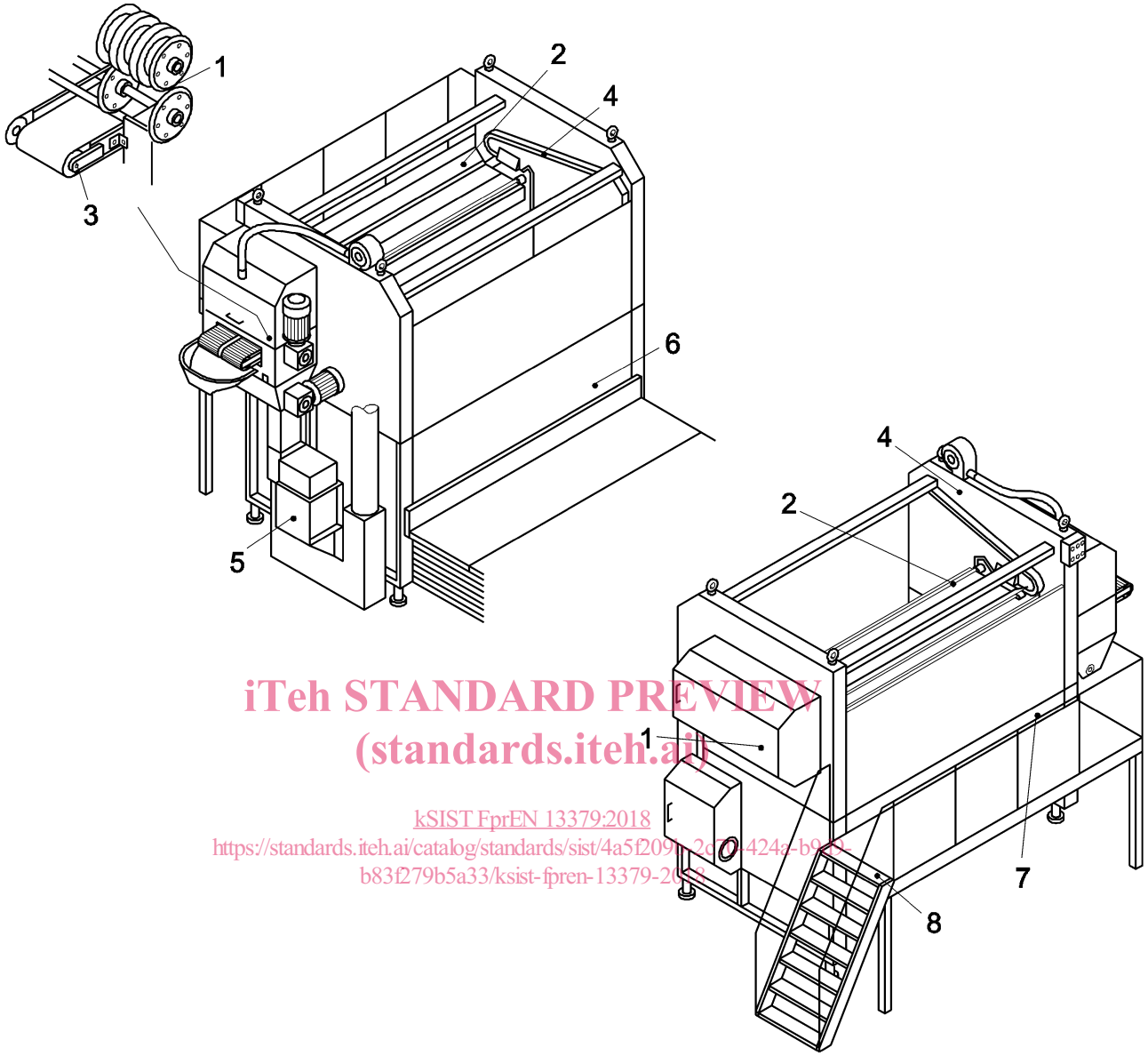
Key

1 to 10 hazard zones

Figure 1— Hazard zones at the spreader

4.2 Stripping and cutting machine

The stripping and cutting machine (see Figure 2) is positioned after the cooler or after the stick stacker. The sticks with the dried product are taken over, the product is stripped off the sticks and is cut to the desired length. The cut product is discharged via oscillating conveyors or conveyor belts and is transferred to the packaging unit or to a stacker. The cut-off material is in most cases transported away by means of a pneumatic conveying line. The empty sticks are transferred to the stick return conveyor. Normally, the stripping and cutting machine comprises also a stick removal device, which takes off the empty sticks to allow for their cleaning or repair.



Key

1 to 8 hazard zones

Figure 2 — Hazard zones at the stripping and cutting machine

4.3 Stick return conveyor

The stick return conveyor (see Figure 3) brings the empty sticks from the stripping and cutting machine back to the spreader. This device is usually positioned underneath the dryers.

In certain cases one of the functions of this return conveyor is the formation of a stick magazine with the sticks being transported possibly in several tiers.