SLOVENSKI STANDARD
SIST EN 13379:2002+A1:2013

01-april-2013

Nadomešča:
SIST EN 13379:2002

Stroji za izdelavo testenin - Stroji za razvlačenje, valjanje in rezanje, transporter za vračanje palic, skladišče palic - Varnostne in higienske zahteve (vključno z dopolnilom A1)

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

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

Machines pour pâtes alimentaires - Étendeuses, dégarnisseuses-découpeuses, convoyeurs de retour des cannes et accumulateurs de cannes - Prescriptions relatives à la sécurité et à l'hygiène

Ta slovenski standard je istoveten z: **EN 13379:2001+A1:2013**

ICS:

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

SIST EN 13379:2002+A1:2013 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13379:2001+A1

January 2013

ICS 67.260

Supersedes EN 13379:2001

English Version

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

Machines pour pâtes alimentaires - Étendeuses, dégarnisseuses-découpeuses, convoyeurs de retour des cannes et accumulateurs de cannes - Prescriptions relatives à la sécurité et à l'hygiène

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This European Standard was approved by CEN on 10 February 2001 and includes Amendment 1 approved by CEN on 20 October 2012.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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Foreword

[A1] This document (EN 13379:2001+A1:2013) 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. [A1]

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of an identical text or by endorsement, at the latest by July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.

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 includes Amendment 1, approved by CEN on 2012-10-20.

This document supersedes EN 13379:2001.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1] [A1].

It is one of a series of safety standards for machines used in continuous pasta processing plants.

[A1] 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 standard. [A1]

[A1] *deleted text* [A1]

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

〉A1〈 This 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. 〈A1〉

1 Scope

This European Standard applies to spreader, stripping and cutting machine, as well as the stick return conveyor and the stick magazine (see clause 3), used in continuous pasta processing plants able to produce more than 100 kg/h.

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

This European Standard does not apply to:

— household machines,

— semiautomatic machines, so called "batch machines" requiring manual loading.

The significant hazards covered by this standard are listed in clause 4.

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

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

〉A1〈 This European Standard is not applicable to machines in its scope which are manufactured before the date of its publication as EN. 〈A1〉

2 Normative references

〉A1〈 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. 〈A1〉

〉A1〈 EN 953:1997+A1:2009, *Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards*

EN 982:1996+A1:2008, *Safety of machinery – Safety requirements for fluid power systems and their components – Hydraulics*

EN 1088:1995+A2:2008, *Safety of machinery – Interlocking devices associated with guards – Principles for design and selection*

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 60332-1-1:2004, *Tests on electric and optical fibre cables under fire conditions – Part 1-1: Test for vertical flame propagation for a single insulated wire or cable – Apparatus (IEC 60332-1-1:2004)*

EN 60332-1-2:2004, *Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame (IEC 60332-1-2:2004)*

EN 60332-1-3:2004, *Tests on electric and optical fibre cables under fire conditions – Part 1-3: Test for vertical flame propagation for a single insulated wire or cable – Procedure for determination of flaming droplets/particles (IEC 60332-1-3:2004)*

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

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

EN ISO 3744:2010, *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 3744:2010)*

EN ISO 3746:2010, *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 3746:2010)*

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

EN ISO 4871:2009, *Acoustics – Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 7731:2008, *Ergonomics – Danger signals for public and work areas – Auditory danger signals (ISO 7731:2003)*

EN ISO 9614-1:2009, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 1: Measurement at discrete points (ISO 9614-1:1993)*

EN ISO 9614-2:1996, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 2: Measurement by scanning (ISO 9614-2:1996)*

EN ISO 11204:2010, *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 11204:2010)*

EN ISO 11688-1:2009, *Acoustics – Recommended practice for the design of low-noise machinery and equipment – Part 1: Planning (ISO/TR 11688-1:1995)*

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

EN ISO 13849-1:2008, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design (ISO 13849-1:2006)*

EN ISO 13850:2008, *Safety of machinery – Emergency stop – Principles for design (ISO 13850:2006)*

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 14122-1:2001, *Safety of machinery – Permanent means of access to machinery – Part 1: Choice of fixed means of access between two levels (ISO 14122-1:2001)*

EN ISO 14122-2:2001, *Safety of machinery – Permanent means of access to machinery – Part 2: Working platforms and walkways (ISO 14122-2:2001)*

EN ISO 14122-3:2001, *Safety of machinery – Permanent means of access to machinery – Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001)*

EN ISO 14122-4:2004, *Safety of machinery – Permanent means of access to machinery – Part 4: Fixed ladders (ISO 14122-4:2004)*

ISO 468:1982, *Surface roughness – Parameters, their values and general rules for specifying requirements* A1

A1

3 Terms and definitions A1

A1 For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and the following apply. A1

3.1
spreader (fig.1)
The spreader 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 by the stick return conveyor and can be heated or treated with edible oil before they are covered with product anew.

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

3.2
stripping and cutting machine (fig.2)
The stripping and cutting machine is positioned after the cooler or after the stick stacker. The stick 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.

3.3
stick return conveyor and stick magazine (fig.3)
The stick return conveyor 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.

A further stick magazine, called intermediate stick magazine, for a small number of product-covered sticks, can become necessary for plants working without a stick stacker. In this case, the intermediate stick magazine is placed ahead of the stripping and cutting machine.

Figure 3 shows the arrangement of the return stick conveyor and the stick magazine within a long-pasta line.

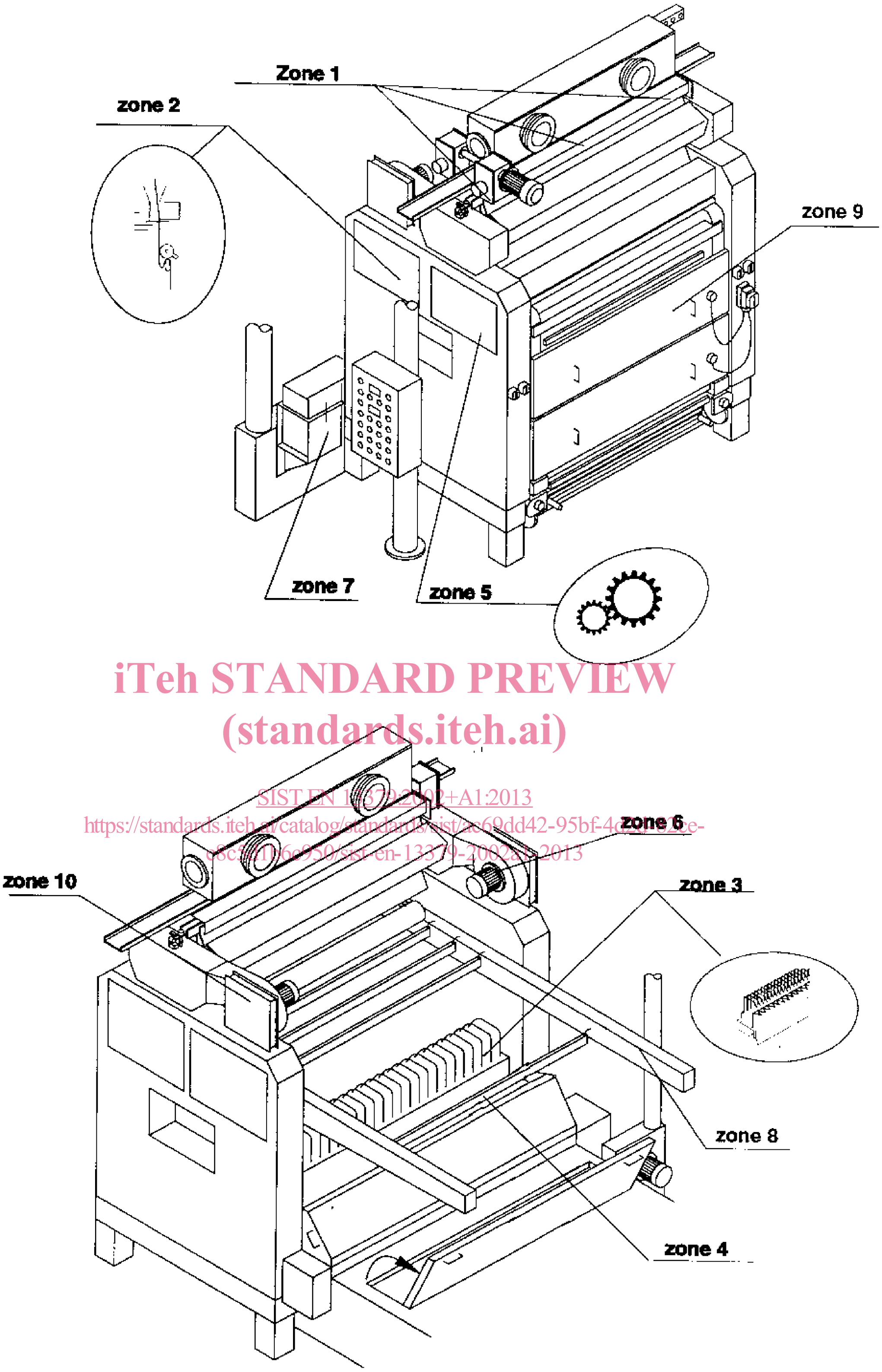

Figure 1 — Hazard zones at the spreader

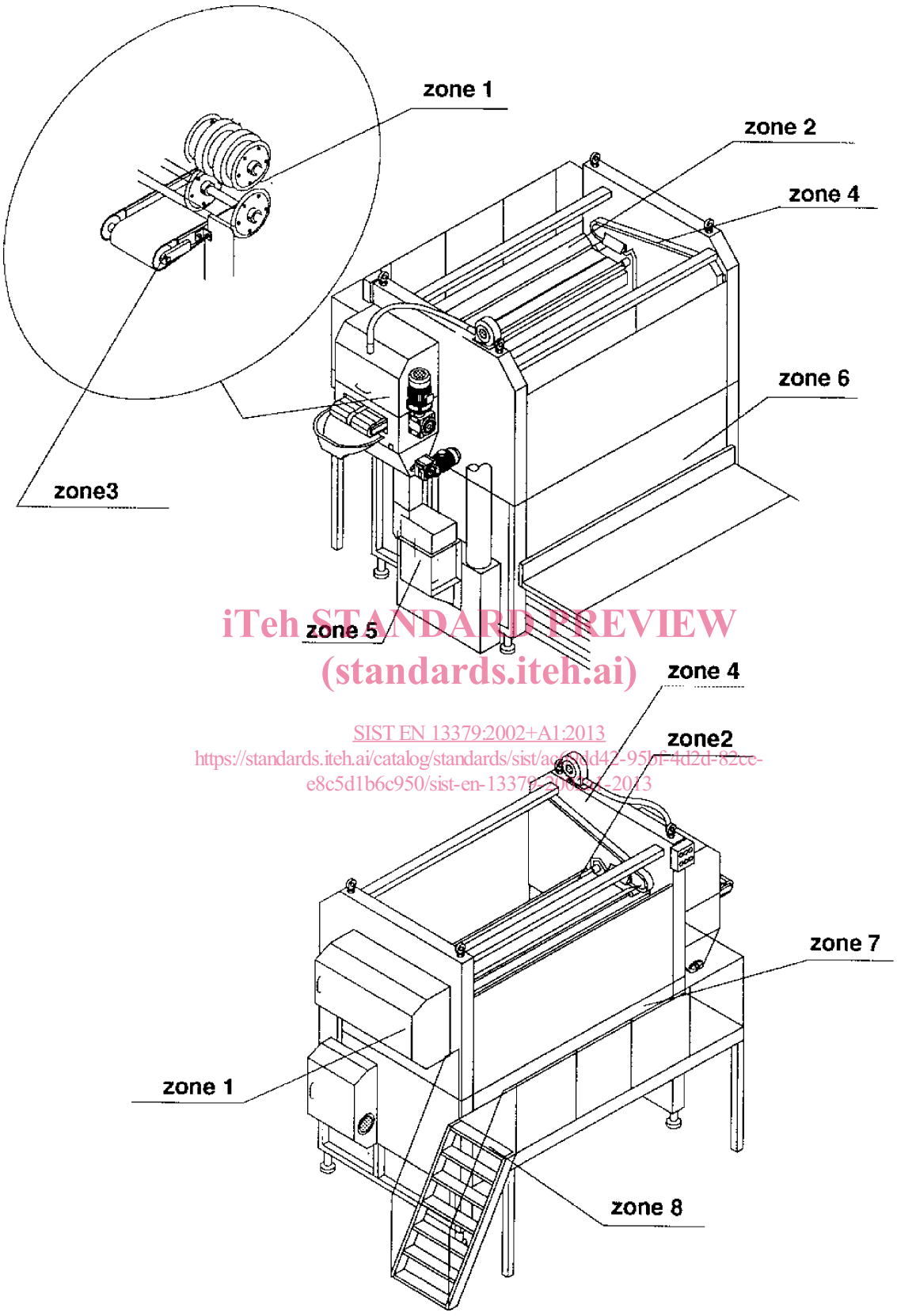

Figure 2 — Hazard zones at the stripping and cutting machine

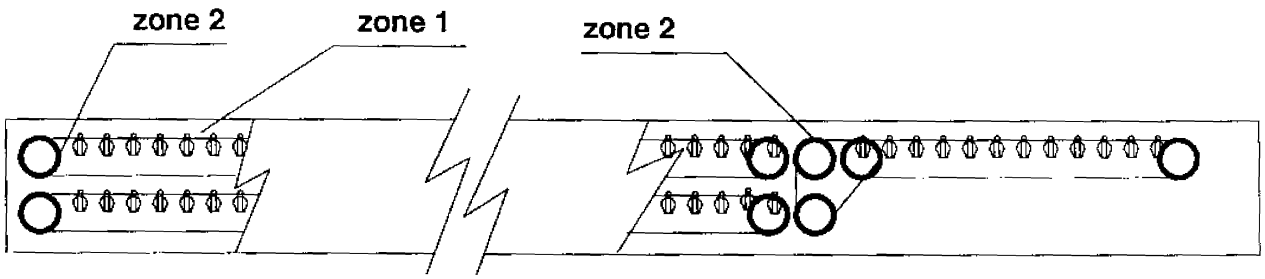

Figure 3 — Hazard zones at the return conveyor and stick magazine

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

3.5
batch machine
machine where the pre-formed pasta is loaded in separate units. The material is fed into the machine under manual control and the machine is emptied before a new cycle is started.

4 List of hazards

〈A1〉

4.1 General 〈A1〉

This clause covers all hazards, as far as they are considered in this European Standard, and identified by risk assessment significant for this type of machinery and requiring an action to eliminate or reduce risk.

4.2 Mechanical hazards

〈A1〉

4.2.1 General 〈A1〉

The significant mechanical hazards are:

— crushing hazard;

— cutting or severance hazard;

— entanglement hazard;

— shearing hazard;

— impact hazard;

The examples shown in figures 1, 2 and 3 illustrate the danger zones associated with these hazards.