



**SLOVENSKI STANDARD**  
**oSIST prEN 15467:2022**

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**Stroji za predelavo hrane - Stroji za odstranjevanje ribjih glav in filetiranje rib -  
Varnostne in higienske zahteve**

Food processing machinery - Fish heading and filleting machines - Safety and hygiene requirements

Nahrungsmittelmaschinen - Fischköpf- und -filetiermaschinen - Sicherheits- und Hygieneanforderungen

Machines pour les produits alimentaires - Machines à étêter et à fileter le poisson - Prescriptions relatives à la sécurité et à l'hygiène

**Ta slovenski standard je istoveten z: prEN 15467**

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**ICS:**

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

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**prEN 15467**

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English Version

## Food processing machinery - Fish heading and filleting machines - Safety and hygiene requirements

Machines pour les produits alimentaires - Machines à étêter et à fileter le poisson - Prescriptions relatives à la sécurité et à l'hygiène

Nahrungsmittelmaschinen - Fischköpf- und -filetiermaschinen - 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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## prEN 15467:2022 (E)

### European foreword

This document (prEN 15467:2022) 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 CEN enquiry.

This document will supersede EN 15467:2014.

Annex C provides details of significant technical changes between this document and the previous edition.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

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

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## Introduction

This European Standard is a type-C-standard as stated in EN ISO 12100:2010.

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

When provisions of this type-C-standard are different from those that 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.

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**prEN 15467:2022 (E)****1 Scope**

This document specifies the safety and hygiene requirements for the design and construction of automatic fish heading and fish filleting machines (defined in Clause 3), using knives and auxiliary equipment (only knife, knife holders and nobbing equipment).

This document applies to machinery and equipment for the heading and filleting of fish in the fish processing industry, and in the distribution circuit (e.g. mass retailing).

This document deals with significant hazards, hazardous situations, and events relevant to fish heading and filleting machines foreseeable by the manufacturer.

This document is not applicable to fish heading and filleting machines that are manufactured before the date of publication as this document.

**2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 614-1:2006+A1:2009, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

EN 1005-2:2003+A1:2008, *Safety of machinery — Human physical performance — Part 2: Manual handling of machinery and component parts of machinery*

EN 1672-2:2020, *Food processing machinery — Basic concepts — Part 2: Hygiene and cleanability requirements*

EN 60204-1:2018, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2016, modified)*

EN 60447:2004, *Basic and safety principles for man-machine interface, marking and identification — Actuating principles (IEC 60447:2004)*

EN 60529:1991<sup>1)</sup>, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)*

EN IEC 61496-1:2020, *Safety of machinery — Electro-sensitive protective equipment — Part 1: General requirements and tests (IEC 61496-1:2020)*

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 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413:2010)*

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<sup>1)</sup> As impacted by EN 60529:1991/corrigendum May 1993, EN 60529:1991/A1:2000, EN 60529:1991/A2:2013, EN 60529:1991/A2:2013/AC:2019-02 and EN 60529:1991/AC:2016-12.



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 11201:2010, *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 11201:2010)*

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 13732-3:2008, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 3: Cold surfaces (ISO 13732-3:2005)*

EN ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2015)*

EN ISO 13850:2015, *Safety of machinery — Emergency stop function — Principles for design (ISO 13850:2015)*

EN ISO 13854:2019, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body (ISO 13854:2017)*

EN ISO 13855:2010, *Safety of machinery — Positioning of safeguards with respect to the approach speeds of parts of the human body (ISO 13855:2010)*

EN ISO 13856-2:2013, *Safety of machinery — Pressure-sensitive protective devices — Part 2: General principles for design and testing of pressure-sensitive edges and pressure-sensitive bars (ISO 13856-2:2013)*

EN ISO 13857:2019, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2019)*

EN ISO 14118:2018, *Safety of machinery — Prevention of unexpected start-up (ISO 14118:2017)*

EN ISO 14119:2013, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection (ISO 14119:2013)*

EN ISO 14120:2015, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards (ISO 14120:2015)*

EN ISO 14122-1:2016, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means and general requirements of access (ISO 14122-1:2016)*

EN ISO 14122-2:2016, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2016)*

EN ISO 14122-3:2016, *Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2016)*

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EN ISO 14122-4:2016, *Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders (ISO 14122-4:2016)*

EN ISO 14738:2008, *Safety of machinery — Anthropometric requirements for the design of workstations at machinery (ISO 14738:2002, including Cor 1:2003 and Cor 2:2005)*

**3 Terms, definitions and descriptions****3.1 Terms and definitions**

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

**3.1.1****filleting**

process consisting of the removal of spine/spinal cord and/or collarbones from fish

**3.1.2****splitting**

cutting of fish into fillets with the spine on one of the filets, or the spine divided on both filets

**3.1.3****heading**

de-heading process, including V-cutting, flat-cutting, round-cutting, and guillotine-cutting

**3.1.4****nobbing**

cutting off the head and pulling out the intestines [prEN 15467:2022](https://standards.iteh.ai/catalog/standards/sist/680f4dbc-acd5-49fd-b4af-6e67e403903d/osist-pren-15467-2022)

**3.1.5****gutting**

removal of the intestines from fish

**3.1.6****in-feed**

part of the machine where the product is placed and subsequently fed to the machine

**3.1.7****knife**

cutting tool with a sharp firm or corrugated cutting edge, intended for cutting of meat, bone and similar parts of a fish

Note 1 to entry: The knife may be:

- stationary,
- reciprocating,
- rotating circular,
- or an endless blade.

**3.1.8****knife-holder (blade removing device)**

device to make the knife safe to grasp during mounting and dismounting

Note 1 to entry: The knife-holder may be an integrated part of the knife or detachable.

**3.1.9****knife-edge guard**

device guarding the knife-edge during the mounting and dismounting of the knife

Note 1 to entry: A knife-edge guard may be a detachable or an integral part of the machine.

**3.1.10****knife-carrier**

device that protects the operator and guards the knife during transport and storage

**3.1.11****processing**

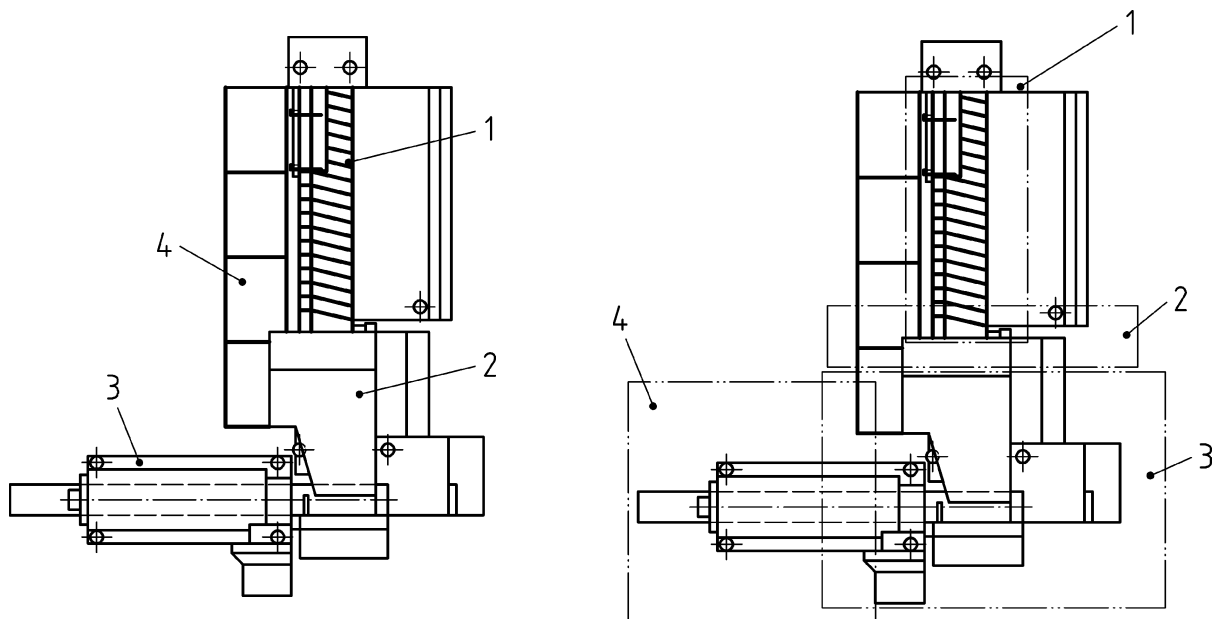
action that covers one or more of the following terms: filleting, splitting, heading, nobbing, gutting and similar handling

**3.2 Descriptions****3.2.1 Tray in-feed machine**

A tray in-feed machine is a processing machine usually with one or two endless chains mounted with fixed trays for transporting and positioning the fish through the processing.

NOTE The fish can be placed manually or automatically in the fixed trays.

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**Key**

- 1 one or two chains with fixed trays
- 2 processing unit (de-heading, filleting, nopping, gutting, etc.)
- 3 transfer or discharge
- 4 operator's platform

**Key**

- 1 in-feed area: The area where the fish is placed in the tray, either manual or by a feeding machine
- 2 fish-entrance to processing area: The area where the tray-chain and fish moves into the processing area
- 3 processing area
- 4 transfer and/or discharge area: The area where the processed fish and the offal leaves the machine

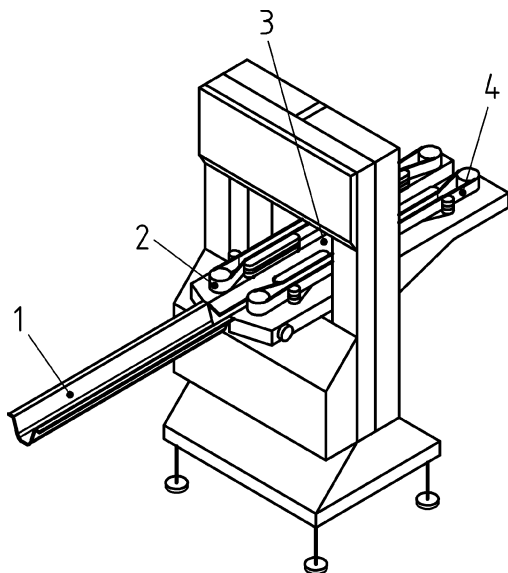
**a) Example of a tray in-feed machine      b) Tray in-feed machine - Hazard zones**

**Figure 1 — Tray in-feed machine**

### 3.2.2 Belt in-feed machine

A belt in-feed machine is a processing machine that usually is equipped with two parallel endless belts.

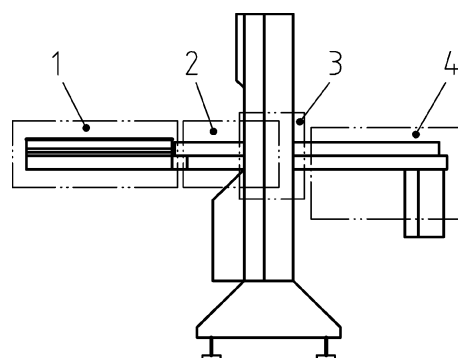
NOTE The fish is manually placed between the belts and is fed to the machine.



#### Key

- 1 in-feed slide
- 2 parallel belts and fish-entrance to processing area
- 3 processing area
- 4 transfer or discharge end

#### a) Example of a belt in-feed machine



#### Key

- 1 in-feed area: the area where the fish manually is placed between the feeding belts
- 2 fish-entrance to processing area: the area where the feeding belts and fish moves into the processing area
- 3 processing area
- 4 transfer and/or discharge area: the area where the processed fish and the offal leaves the machine

#### b) Belt in-feed machines - hazard zones shown without guards

Figure 2 — Belt in-feed machine