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# Food processing machinery - Smokehouses - Safety and hygiene requirements

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## Food processing machinery - Smokehouses - Safety and hygiene requirements

Machines pour les produits alimentaires - Fumoirs -  
Prescriptions relatives à la sécurité et à l'hygiène

Nahrungsmittelmaschinen - Räucheranlagen - Sicherheits-  
und Hygieneanforderungen

This European Standard was approved by CEN on 10 May 2012.

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## **Foreword**

This document (EN 15861:2012) 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 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of an identical text or by endorsement, at the latest by December 2012, and conflicting national standards shall be withdrawn at the latest by December 2012.

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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.

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## **Introduction**

This document is a type C standard as stated in EN ISO 12100:2010.

This European Standard is concerned with types of machinery referred to as “smokehouses”. The extent to which hazards, hazardous situations and events are covered is indicated in the scope of this document.

When provisions of this type C standard differ 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.

## **1 Scope**

### **1.1 Requirements**

This European Standard specifies safety and hygiene requirements for the design and manufacture of smokehouses for commercial use.

The machines covered by this standard are used for the smoking of foodstuffs, especially meat, fish or similar products, as well as the connected heating and cooling processes.

Smokehouses consist of the following elements:

- Smoke chamber with equipment;
- Air handling system;
- Smoke generator;
- Pipes and ducts;
- Cleaning systems.

This European Standard deals with all significant hazards, hazardous situations and events and hygiene requirements relevant to smokehouses when they are used as intended and under reasonably foreseeable conditions of misuse.

This European Standard deals with the hazards which can arise during the whole life of smokehouses.

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

### **1.2 Types**

This European Standard covers the following types of smokehouses and installations:

- Smokehouses with friction smoke generator;
- Smokehouses with steam smoke generator;
- Smokehouses with liquid smoke generator;
- Smokehouses with saw dust and wood chip smoke generators;
- Smokehouses with one or several smoke chambers for batch production;
- Smokehouses for continuous production.

This European Standard does not cover automatic production.

## 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 349:1993+A1:2008, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

EN 614-1:2006+A1:2009, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles*

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

EN 1005-1:2001+A1:2008, *Safety of machinery — Human physical performance — Part 1: Terms and definitions*

EN 1005-3:2002+A1:2008, *Safety of machinery — Human physical performance — Part 3: Recommended force limits for machinery operation*

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 1839:2003, *Determination of explosion limits of gases and vapours*

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

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

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)*

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 13732-1:2008, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1:2006)*



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