

**Masinaohutus. Metallivaluseadmete ohutusnõuded
KONSOLIDEERITUD TEKS**

Safety of machinery - Safety requirements for pressure
metal diecasting units CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 869:2006+A1:2009 sisaldab Euroopa standardi EN 869:2006+A1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 29.05.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 08.04.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 869:2006+A1:2009 consists of the English text of the European standard EN 869:2006+A1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 29.05.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 08.04.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Safety of machinery - Safety requirements for pressure metal diecasting units

Sécurité des machines - Prescriptions de sécurité pour les chantiers de moulage des métaux sous pression

Sicherheit von Maschinen - Sicherheitsanforderungen an Metall-Druckgießanlagen

This European Standard was approved by CEN on 6 August 2006 and includes Amendment 1 approved by CEN on 1 March 2009.

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Foreword

This document (EN 869:2006+A1:2009) has been prepared by Technical Committee CEN/TC 202 "Foundry machinery", 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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2009-03-01.

This document supersedes ^{A1} EN 869:2006 ^{A1}.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ^{A1} ^{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).

^{A1} For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. ^{A1}

An assessment of the foreseeable risks arising from the use of the machinery was carried out when this standard was drafted by CEN/TC 202/WG 1, comprising experts from the following countries: Germany, Italy, Spain, Sweden and Switzerland.

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

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.

[A1] Where for clarity an example of a preventative measure is given in the text, this should not be considered as the only possible solution. Other solutions can be used as far as they fulfil correctly the criteria expressed in the requirement.

This European Standard assumes, that the equipment is operated and maintained by trained personnel. **[A1]**

1 Scope

This European Standard specifies the safety requirements for pressure metal diecasting units.

It applies to pressure diecasting machines and to the interfaces with the following ancillary equipment:

- die,
- melting, holding and dosing furnaces (see EN 746-1),
- metal feeding equipment,
- inserting and removal devices,
- spraying appliances,
- heat exchanger for the die.

This ancillary equipment itself is not covered.

Additional risks arising from the material being cast are not covered.

This standard does not apply to low pressure diecasting machines and/or gravity diecasting machines.

This standard deals with all significant hazards, hazardous situations and events relevant to pressure diecasting machines when used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4). It provides the requirements to be met by the manufacturer to ensure the safety of persons and property during transport, commissioning, use, de-commissioning and maintenance periods, as well as in the event of foreseeable failures or malfunctions that can occur in the equipment.

This document is not applicable to pressure metal diecasting units/machinery which are manufactured before the date of its publication as EN.

2 Normative references

The following referenced documents are indispensable for the application 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.

A1 deleted text **A1**

EN 349, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body*

A1 deleted text **A1**

EN 574:1996, *Safety of machinery — Two-hand control devices — Functional aspects — Principles for design*

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

EN 614-2, *Safety of machinery — Ergonomic design principles — Part 2: Interactions between the design of machinery and work tasks*

A1 EN 842, *Safety of machinery — Visual danger signals — General requirements, design and testing **A1***

EN 894-1, *Safety of machinery — Ergonomic requirements for the design of displays and control actuators — Part 1: General principles for human interactions with displays and control actuators*

EN 894-2, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 2: Displays*

EN 894-3, *Safety of machinery — Ergonomics requirements for the design of displays and control actuators — Part 3: Control actuators*

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

A1 deleted text **A1**

A1 EN 981, *Safety of machinery — System of auditory and visual danger and information signals **A1***

EN 982, *Safety of machinery — Safety requirements for fluid power systems and their components — Hydraulics*

EN 983, *Safety of machinery — Safety requirements for fluid power systems and their components — Pneumatics*

EN 999, *Safety of machinery — The positioning of protective equipment in respect of approach speeds of parts of the human body*

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

EN 1265, *Noise test code for foundry machines and equipment*

EN 13861, *Safety of machinery — Guidance for the application of ergonomics standards in the design of machinery*

EN 1760-2, *Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*

EN 60204-1:2006, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2006)* ^{A1}

EN 61310-1, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, auditory and tactile signals* ^{A1} (IEC 61310-1:2007) ^{A1}

EN 61310-2, *Safety of machinery — Indication, marking and actuation — Part 2: Requirements for marking* ^{A1} (IEC 61310-2:2007) ^{A1}

EN ISO 7731, *Ergonomics — Danger signals for public and work areas — Auditory danger signals (ISO 7731:2003)* ^{A1}

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)*

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 13732-1:2006)* ^{A1}

EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)* ^{A1}

EN ISO 13850:2006, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006)* ^{A1}

EN ISO 13857:2008, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)* ^{A1}

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

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

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

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs in workplaces and public areas* ^{A1}

ISO 7000, *Graphical symbols for use on equipment — Index and synopsis*