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BS EN 289:2014



BSI Standards Publication

Plastics and rubber machines — Compression moulding machines and transfer moulding machines — Safety requirements

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This British Standard is the UK implementation of EN 289:2014. It supersedes BS EN 289:2004+A1:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/3/2, Rubber and plastics machine - Safety.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Plastics and rubber machines - Compression moulding machines and transfer moulding machines - Safety requirements

Machines pour les matières plastiques et le caoutchouc -
Machines de moulage par compression et machines de
moulage par transfert - Prescriptions de sécurité

Kunststoff- und Gummimaschinen - Formpressen und
Spritzpressen - Sicherheitsanforderungen

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 289:2014) has been prepared by Technical Committee CEN/TC 145 "Plastics and rubber machines", the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.

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 supersedes EN 289:2004+A1:2008.

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.

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

Compared with EN 289:2004+A1:2008, the following significant changes have been made:

- a) modification of main element of the title;
- b) replacement of safeguard groups I, II and III by more precise specifications of the safeguards in the respective clauses;
- c) specification of the safety related parts of control systems with reference to EN ISO 13849-1:2008 instead of specified types I, II and III and EN 954 and deletion of corresponding normative Annexes A, B, C, D, E and H;
- d) addition of safety requirements for:
 - 1) electromagnetic interference;
 - 2) machines with electrical axes;
 - 3) platen movements by gravity on upstroking presses;
 - 4) magnetic clamping systems;
 - 5) carousel machines;
 - 6) power operated mould changing equipment;
 - 7) hazards generated by neglecting ergonomic principles in machine design;
- e) deletion of Annex G.

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, 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.

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Introduction

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

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

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1 Scope

This European Standard specifies the essential safety requirements for compression moulding machines and transfer moulding machines for the moulding of plastics and/or rubber with a closing movement more than 6 mm.

In this document a compression moulding machine or transfer moulding machine as described above is designated by the term "press" (see 3.1).

This document deals with all significant hazards, hazardous situations and events relevant to presses, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4).

The safety requirements are specified for the additional hazards arising from:

- shuttle/turn tables used for loading/unloading and/or cooling,
- magnetic clamping systems.

For other ancillary equipment, as defined in 3.7, that is not part of the press, only the requirements for the interaction between presses and ancillary equipment, especially loading and unloading devices are specified.

The following machines or units are excluded:

- pneumatic presses for plastic and rubber;
- injection moulding machines (see EN 201:2009);
- tyre curing machines (see prEN 16474);
- presses for curing inner tubes and curing bags;
- hydraulic presses for the cold working of metals as covered by EN 693:2001+A2:2011;
- mechanical presses for the cold working of metals as covered by EN 692:2005+A1:2009;
- pneumatic presses for the cold working of metals as covered by EN 13736:2003+A1:2009;
- thermoforming machines (see EN 12409:2008+A1:2011);
- reaction injection moulding (RIM) machines (see EN 1612-1:1997+A1:2008);
- the extruder of the carousel machine(see EN 1114-1:2011).

This standard does not cover:

- hazards caused by the processing of materials which may lead to a risk of explosion, see 7.2.2;
- the requirements of Directive 94/9/CE concerning equipment and protective systems intended for use in potentially explosive atmospheres;
- requirements for the design of exhaust ventilation systems, see 5.3.5 and 7.2.8.

This document is not applicable to presses manufactured before the date of its publication as EN.