

American National Standard

*for Plastics Machinery –
Vertical Clamp Injection
Molding Machines (VCIMM) –
Safety Requirements for Manufacture,
Care, and Use*

ANSI/SPI B151.29-2002



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Sponsor

The Society of the Plastics Industry, Inc.

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American National Standard

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Foreword (This foreword is not part of American National Standard ANSI/SPI B151.29-2002.)

The project on safety requirements for the manufacture, care, and use of vertical injection molding machines was initiated under the auspices of the Injection Molding Section of the Machinery Division, and the Safety Committee of the Molders Division, of the Society of Plastics Industry, Inc. (SPI).

Both divisions of the SPI have long been concerned with operator safety on plastics processing equipment. Accordingly, each section of the divisions has established a standards development committee, charged with the task of establishing necessary standards.

A standard treating the manufacture, care, and use of vertical injection molding machines is complicated by the wide variety and sizes of machines manufactured and in use, and by the virtually infinite combinations of parts being produced, the production methods used, and the operating conditions existing in industry today.

The primary objective of this standard is to minimize hazards to personnel associated with machine activity by establishing requirements for the manufacture, care, and use of these machines.

To accomplish this objective, the committee decided to approach the problem of machine safety from two directions:

- Eliminating by design certain recognized hazards and establishing standard approaches to design so that machines available from competitive manufacturers will have similar operational characteristics.
- Safeguarding the machine to protect personnel from recognized hazards.

To assist in the interpretation of these requirements, responsibilities have been assigned to the manufacturer, the remanufacturer, the modifier, and the employer.

Recognizing the impossibility of immediate updating of design and manufacturing methods, clauses 5 and 7 shall become effective one year after the approval date (April 22, 2002) of this standard.

Suggestions for improvement of this standard will be welcome. They should be sent to the Society of the Plastics Industry, Inc., 1801 K Street, NW, Washington DC 20006-1301.

The Injection Molding Section, Standards Development Committee of the Machinery Division, and the Safety Committee of the Molders Division of the Society of Plastics Industry, Inc., which were was responsible for this standard, had the following members:

B. Carteaux, Chairman
(Van Dorn Demag Corp)
W. Bishop, Secretariat
(Machinery Division of the
Society of the Plastics Industry)

J. Adamowicz
(Arburg, Inc.)
G. Atkinson
(Husky Injection Molding Systems, Ltd.)
C. Carls
(Battenfeld of America, Inc.)
J. Ewing
(BOY Machines Inc.)
G. Frohring
(Mini-Jector Machinery Corporation)
S. Glover
(Herzog USA)
R. Hetke
(Engel Canada, Inc.)
D. Hidding
(Dana Molded Products, Inc.)
C. Irick
(EPCO)
T. Koury
(Textron Automotive, Inc.)
L. Mills
(Van Dorn Demag)
R. Monteith
(Milacron, Inc.)
F. Pierson
(Toshiba Machine Co., America)
J. Rexford
(HPM Corporation)
T. Shively
(Wabash MPI)
R. Swart
(Autojectors, Inc.)

Explanation of Standard Format

American National Standard ANSI/SPI B151.29-2002 uses a two-column format to provide both specific requirements and supporting information.

The left column, designated "Standard Requirements," is confined solely to these requirements and is printed in bold type.

The right column, designated "Explanatory Information," contains only information that is intended to clarify the standard. This column is not a part of the standard.

Operating rules (safe practices) are not included in either column unless they are of such a nature as to be vital safety requirements, equal in weight to other requirements, or guides to assist in compliance with the standard.

**American National Standard
for Plastics Machinery –**

**Vertical Clamp Injection Molding Machines (VCIMM) –
Safety Requirements for Manufacture, Care, and Use**

STANDARD REQUIREMENTS

EXPLANATORY INFORMATION

(Not part of American National Standard for Plastics Machinery – Vertical Clamp Injection Molding Machines (VCIMM) – Safety Requirements for Manufacture, Care, and Use, ANSI/SPI B151.29-2002)

1 Scope, Purpose, and Application

1.1 Scope

The requirements of this standard shall apply to all new VCIMMs that process plastic materials and inject said material into a mold held closed by a vertically acting clamp(s).

Safety requirements for the manufacture, care, and use of ancillary equipment for VCIMMs are not covered by this standard.

1.2 Purpose

The purpose of this standard is to minimize hazards to personnel working on, or adjacent to a VCIMM.

E1.1 Scope

Many configurations exist for these VCIMMs. Examples include, but not limited to:

- a) Single station, down and/or up, moving clamp (SSVCIMM).
- b) Multiple vertical clamp stations rotating about a common axis serving one or multiple *injection units* (MSVCIMM).
- c) Shuttle table between clamp and auxiliary station(s) or clamp(s) (MSVCIMM).
- d) Rotary table operating within one or more clamp or auxiliary station(s) (MSVCIMM).