

ANSI/SPI B151.21-2003

# American National Standard

*for Plastics Machinery –  
Injection Blow Molding Machines –  
Safety Requirements for  
Manufacture, Care, and Use*

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**ANSI/SPI B151.21-2003**

Revision of  
ANSI/SPI B151.21-2000

American National Standard  
for Plastics Machinery –  
Injection Blow Molding Machines –  
Safety Requirements for  
Manufacture, Care, and Use

Sponsor

**The Society of the Plastics Industry, Inc.**

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**American National Standards Institute, Inc.**

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**Foreword** (This foreword is not part of American National Standard ANSI/SPI B151.21-2003.)

This standard is a revision of *American National Standard for Plastics Machinery - Injection Blow Molding Machines - Safety Requirements for the Manufacture, Care, and Use*, ANSI/SPI B151.21-2000. The standard was revised because some paragraphs (5.2.4 and 5.2.5) required modification to conform more closely to changes in technology.

The project on safety requirements for the manufacture, care, and use of injection blow molding machines was initiated under the auspices of the Injection Blow Molding Section of the Machinery Division, and the Safety Committee of the Molders Management Division, of the Society of the 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 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:

- 1) Eliminating by design certain recognized hazards and establishing standard approaches to design so that machines available from competitive manufacturers will have similar operational characteristics
- 2) 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 updating equipment and changing operation methods allied with existing machines immediately after approval date of this standard, a 3-year period has been provided to employers for updating machines.

Recognizing the impossibility of immediate updating of design and manufacturing methods, clauses 5 and 8 shall become effective one year after the approval date 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, Suite 600K, Washington, DC 20006-1301.

Consensus for this standard was achieved by use of the Canvass Method.

The following organizations recognized as having an interest in the standardization of injection blow molding machines were contacted prior to the approval of this standard. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

Alcona Associates  
Association for Manufacturing Technology  
Ford Visteon Division  
Packaging Machinery Manufacturers Institute  
Robotic Industries Association  
Society of the Plastics Industry: Machinery Division  
Society of the Plastics Industry: Molders Division

The Blow Molding Section, Standards Development Committee of the Machinery Division, The Society of the Plastics Industry, Inc, which was responsible for this standard, had the following members:

Douglas L. Sten, Chairperson  
(Uniloy Milacron, Inc./P.M.D.)

Glen Atkinson  
(Husky IMS)  
Karl Bruning  
(Bekum America)  
Frank Kennedy  
(Davis-Standards)  
Tim Koury  
(Blue Water Plastics, Inc.)  
Robert Monteith  
(Milacron, Inc.)  
Peter Schmidt  
(Krupp Plastics & Rubber Machinery/USA)

Others who worked with the Blow Molding Section of the Machinery Division on the development of this standard were:

Walt Bishop, Secretariat to the committee  
(The Society of the Plastics Industry, Inc.)

### **Explanation of Standard Format**

American National Standard ANSI/SPI B151.21-2003 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 –

## Injection Blow Molding Machines – Safety Requirements for Manufacture, Care, and Use

### STANDARD REQUIREMENTS

#### 1 Scope, Purpose, and Application

##### 1.1 Scope

The requirements of this standard shall apply to all injection blow molding machines (IBMMs) (including Injection Stretch Blow) that process plastic materials and produce and/or deliver a preform that is then blown into the shape of a mold held together by a vertically or horizontally acting clamp(s). Safety requirements for the manufacture of ancillary equipment for IBMMs are not covered by this standard.

##### 1.2 Purpose

The purpose of this standard is to minimize hazards to personnel.

##### 1.3 Application

Injection Blow Molding Machines shall be referred to as IBMMs throughout this standard.

##### 1.3.1 New Installations

The requirements of this standard pertaining to manufacture shall apply to all new or remanufactured IBMMs installed in the United States of America. Date of manufacture of the new or remanufactured machine (month and year) shall be affixed permanently and legibly to the machine along with the name of the manufacturer or remanufacturer. Compliance shall be achieved within one year after the approval date of this standard.

### EXPLANATORY INFORMATION

(Not part of American National Standard for Plastics Machinery – Injection Blow Molding Machines – Safety Requirements for Manufacture, Care, and Use, ANSI/SPI B151.21-2003.)

##### E1.3 Application

Inquiries with respect to the application of, or substantive requirements of, this Standard should be addressed to the Society of the Plastics Industry, Inc., 1801 K Street, NW, Suite 600K, Washington, DC 20006-1301.

##### E1.3.1 New Installations

IBMMs may be manufactured or remanufactured anywhere in the world.