



Consumer safety specification for components, assembly, and use of a trampoline

This ASTM Standard F381-95 has been adopted by the Standards Council of New Zealand for use in New Zealand, pursuant to the provisions of the Standards Act 1988.

NZS 5855:1997



Standard Consumer Safety Specification for Components, Assembly, and Use of a Trampoline¹

This standard is issued under the fixed designation F 381; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This consumer safety specification covers the components, the assembly, and the use of a trampoline.

1.2 The trampoline, as referred to in this specification, is delimited in type with respect to a minimum bed size of 2300 in.² (14 838 cm²) and thus used for the purpose of continuous, vertical jumping activities.

1.3 This specification is intended to reduce the demonstrated hazards associated with the use of trampolines by the public.

2. Referenced Documents

2.1 ASTM Standard:

F 355 Test Method for Shock Absorbing Properties of Playing Surface Systems and Materials²

2.2 Illuminating Engineering Society Standard:

IES RP-6 Recommended Practice for Sports Lighting³

3. Terminology

3.1 Definitions:

3.1.1 *trampoline*—a rebound device activated by vertical jumping, upon which gymnastic skills are performed. It is a total system made up of the following integral parts:

3.1.1.1 *frame*—the horizontal framework constructed of rigid supportive materials.

3.1.1.2 *bed*—the performing surface.

3.1.1.3 *suspension system*—the bed-supporting system made up of spring-like devices that connect the bed to the frame.

3.1.1.4 *frame pads*—shock-attenuating protective devices that attach to and cover the frame and other applicable parts of the trampoline.

3.1.2 *roller stand*—a device that is used to roll or move, or both, a folding-type trampoline frame.

4. Materials and Manufacture

4.1 When a trampoline is offered for sale by the manufacturer, it shall include the following:

- 4.1.1 A frame,
- 4.1.2 A bed,
- 4.1.3 A suspension system,
- 4.1.4 Frame pads,

4.1.5 An information packet, and

4.1.6 Suitable markings.

5. General Requirements

5.1 The suspension system shall be designed so as to protect the performer from injury due to contact with the sharp ends of the trampoline springs.

5.2 The frame pads shall be securely attached to the frame so as to cover portions of the top surface of the frame. The pads shall be long enough to cover the outer hooks (that is, the hooks attached to the frame) of all the trampoline springs, and wide enough to cover the width of the top surface of the frame plus the outer hooks of the springs as well as the spring-anchor devices on the frame (see Figs. 1 and 2).

5.3 The shock-attenuating material shall limit the severity index to less than 450, when tested in the same thickness as used in the trampoline pad and tested by Test Method F 355 using a 20-lb (9-kg), 20-in.² (129-cm²) round, flat head dropped from a distance of 2 ft (0.61 m).

5.4 The frame pads shall be securely attached to the frame in such a manner so as to provide the protection specified above during use.

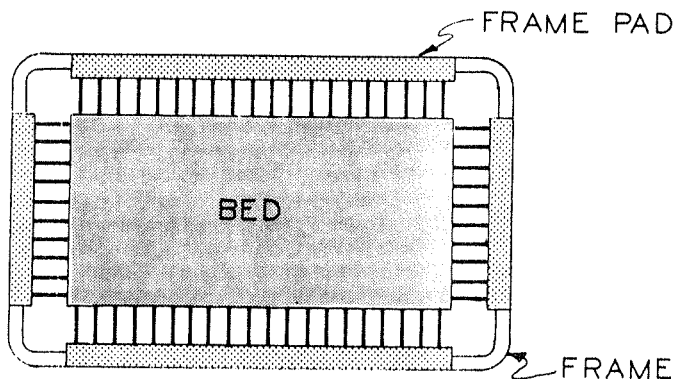


FIG. 1 Location of Pads on the Frame of the Trampoline

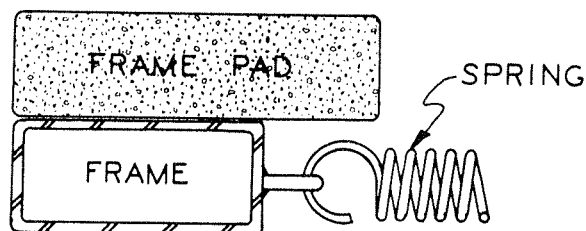


FIG. 2 Location of Frame Pad to Frame and Spring

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² Annual Book of ASTM Standards, Vol 15.07.

³ Available from Illuminating Engineering Society, 345 E. 47th St., New York, N.Y. 10017.

5.5 The suspension system need not be totally covered; but if covered, it shall be of a color sharply contrasting with the color of the trampoline bed.

6. Information Packet

6.1 Each trampoline shall be accompanied by a separate packet of materials clearly marked:

Assembly, Care and Maintenance, and Use and Instructional Materials enclosed. Read these materials prior to assembling and using this trampoline.

The packet shall contain:

- 6.1.1 Assembly instructions,
- 6.1.2 Care and maintenance instructions,
- 6.1.3 Use and instructional materials, and
- 6.1.4 Cautionary statements.

6.2 *Assembly Instructions*—The manufacturer's assembly instructions for the trampoline shall be clearly written and presented so that the trampoline can be properly and safely assembled. The assembly instructions shall emphasize the importance of attaching the frame pads to the frame prior to using the trampoline. Any specific use limitations placed on the trampoline by the manufacturer shall be included in a statement appearing in a box at the bottom of the first page under the word "CAUTION" appearing in capital letters.

6.3 *Care and Maintenance*—The manufacturer's care and maintenance instructions for the trampoline shall contain the following statement:

Inspect the trampoline before each use and replace any worn, defective, or missing parts. The following conditions could represent potential hazards:

- (1) Punctures or holes worn in the bed,
- (2) Deterioration in the stitching of the bed,
- (3) A bent or broken frame,
- (4) Ruptured springs,
- (5) Missing or insecurely attached frame pads,
- (6) A sagging bed, and
- (7) Sharp protrusions on the frame or suspension system.

6.4 *Use and Instructional Material*:

6.4.1 Trampoline use materials shall be supplied by the manufacturer to aid the purchaser in proper placement of the trampoline and in providing and maintaining an appropriate environment for its use. These materials shall include the following information:

(1) Adequate overhead clearance is essential. A minimum of 24 ft (7.3 m) is recommended from the floor or ground for conventional trampolines used for competition or recreation; and a minimum of 15 ft is recommended for all vaulting, diving, and other single-contact trampolines. When used outdoors, provide adequate clearance for wires, tree limbs, fences, and other possible hazards.

(2) The trampoline shall be placed on a level surface before use.

(3) The trampoline should always be used in a well-lighted area. If artificial illumination is provided, it is recommended that such artificial illumination meet the standards of 50 fc (538 lx) as recommended for gymnasiums and field houses in IES Recommended Practice RP-6.

(4) When not in use, the trampoline should be secured against unauthorized use.

(5) There shall be no obstructions beneath the trampoline.

(6) The surface of the bed shall be dry.

(7) Wind or air movement shall be calm to gentle. The trampoline must not be used in gusty or severe winds.

(8) The person responsible for use of the trampoline shall make users aware of practices specified in 6.4.3.

6.4.2 Trampoline instructional materials shall be provided by the manufacturer to aid the purchaser in learning the fundamental trampoline bounces and body positions. These instructional materials shall contain illustrations depicting trampolinists performing the fundamental bounces and body positions accompanied by printed material describing them and suggesting ways to accomplish them. These instructional materials shall be intended for use with conventional trampolines designed for continuous or repetitive bouncing and shall not describe the use of trampoline devices for vaulting, diving, or other activities. Suitable materials shall include information pertaining to:

- Need of Trampoline Safety
- Instructor's Role in Preventing Accidents
- Responsibility of the Instructor
- Accident Classification
- Methods of Accident Prevention
- Instruction Program

6.4.3 The instructional materials shall also include the following statements:

(1) Stop your bounce by flexing your knees as your feet come in contact with the trampoline bed. Learn this skill before you attempt others.

(2) Learn fundamental bounces and body positions thoroughly before trying more advanced skills. A variety of trampoline activities can be carried out by performing the basic fundamentals in various series and combinations, performing one fundamental after another, with or without feet bounces between them.

(3) Climb on and off the trampoline; do not jump. It is a dangerous practice to jump from the trampoline to the floor or ground when dismounting, or on to the trampoline when mounting.

(4) Permit only one performer at a time on the trampoline. More than one person bouncing at a time can be dangerous.

(5) Avoid bouncing too high. Stay low until you can control your bounce and repeatedly land in the center of the trampoline.

(6) Focus your eyes on the end of the trampoline. This will help control your bounce.

(7) Avoid bouncing for too long. Do not bounce when tired.

(8) Do not use the trampoline as a springboard to other objects. Use the trampoline only for trampoline-style bouncing.

(9) Do not attempt somersaults without proper instructions and coaching or without the aid of safety apparatus such as overhead suspension, training rig, or spotting mechanic. Most serious trampoline injuries occur during somersaults.

(10) Use trampoline with mature, knowledgeable supervision.

(11) Keep objects away that could interfere with the performer.

(12) Do not use the trampoline when under the influence of alcohol or drugs.

(13) Use two or more strong people to open or close folding-type trampolines.

(14) For further information or additional instructional materials, contact a competent trampoline instructor.

6.5 *Cautionary Statements*—The following cautionary statements shall be included in the packet:

WARNING

(1) Misuse and abuse of this trampoline is dangerous and can cause serious injuries.

(2) Trampolines, being rebounding devices, propel the performer to unaccustomed heights and into a variety of body movements.

(3) All purchasers and all persons using the trampoline must become familiar with the manufacturer's recommendations for the proper assembly, use, and care of the trampoline, as well as being