



Standard Practice for Patron Transportation Conveyors Used with a Water Related Amusement Ride or Device¹

This standard is issued under the fixed designation F3158; 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 reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice applies to the classification, design, manufacture, construction, and operation of patron transportation conveyors, integral with the operation of water related amusement rides or devices as scoped in Practice [F2376](#).

1.2 This practice applies to conveyors used for patron loading/unloading or to transport patrons on rafts, tubes, or other vehicles. Loading, sequencing, transitioning, starting, and unloading conveyors that carry patrons are included in the scope of this practice.

1.3 This practice shall affect new conveying systems or major modifications of conveyors used in an amusement ride or attraction.

1.4 This practice includes an appendix (non-mandatory), which provides additional information (for example, rationale, background, interpretations, drawings, commentary, and so forth) to improve the user's understanding and application of the criteria presented in this practice. The appendix information shall not be interpreted as mandatory design criteria.

1.5 *Units*—The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

¹ This practice is under the jurisdiction of ASTM Committee [F24](#) on Amusement Rides and Devices and is the direct responsibility of Subcommittee [F24.70](#) on Water Related Amusement Rides and Devices.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[F747 Terminology Relating to Amusement Rides and Devices](#)

[F770 Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices](#)

[F1193 Practice for Quality, Manufacture, and Construction of Amusement Rides and Devices](#)

[F2291 Practice for Design of Amusement Rides and Devices](#)

[F2376 Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems](#)

2.2 ANSI Standards:³

[ANSI/ASME B20.1 Safety Standard for Conveyors and Related Equipment](#)

[ANSI B77.1 Passenger Ropeways—Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors—Safety Requirements](#)

2.3 ASME Standard:⁴

[ASME A17.1 Safety code for Elevators and Escalators](#)

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 This space is reserved (see [X1.1](#)).

4. Classification

4.1 *Type 1 Riding Position Conveyor*—The conveyor may not move while a patron is on the conveyor unless the patron is in riding position on a ride vehicle. Type I conveyors may perform, but are not limited to, one or more of the following functions:

- 4.1.1 Transport,
- 4.1.2 Sequencing,
- 4.1.3 Acceleration,
- 4.1.4 Ingress, and
- 4.1.5 Egress.

4.2 *Type 2 Walk On/Off Conveyor*—Conveyors in which patrons are allowed to walk on or off of the moving conveyor during vehicle loading or unloading. These conveyors are also known as moving station conveyors.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁴ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Two Park Ave., New York, NY 10016-5990, <http://www.asme.org>.