



Standard Specification for Motorized Treadmills¹

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INTRODUCTION

The goal of this specification is to promote proper mechanical design and manufacturing practices for motorized treadmills. Through these practices, this specification aims to assist designers and manufacturers in producing functional, safe machines under proper operational conditions. The equipment user must recognize, however, that a standard alone will not necessarily prevent injuries. Like other physical activities, exercise involving treadmills involves the risk of injury, particularly if the equipment is used improperly. The designers and manufacturers of treadmills should also consider other standards including, but not limited to, those listed below. This specification does not apply to treadmills designed for underwater use.

1. Scope

1.1 This specification covers the establishment of parameters for the design and manufacture of motorized treadmills.

2. Referenced Documents

2.1 ASTM Standards:

F 1749 Specification for Fitness Equipment and Facility Safety Signage and Labels²

F 2106 Test Method for Evaluating Design and Performance Characteristics of Motorized Treadmills²

2.2 UL Standards:³

UL 1647 Motor Operated Massage and Exercise Machines

3. Terminology

3.1 Definitions:

3.1.1 For treadmill terminology, see Fig. 1.

3.1.2 *accessible areas, n*—area accessible to the user or third party when the equipment is in normal use, during setting up, grasping, or correcting pieces of equipment or position of the body. This does not include areas that are accessible during the initial assembly.

3.1.3 *adjustable incline system, n*—components that allow the user to vary the angle of the moving surface relative to the floor.

3.1.4 *catch point, n*—location at which edges, protrusions, or surfaces allow a body part to become injured or clothing to be damaged.

3.1.5 *consumer treadmill, n*—treadmill intended exclusively for use by one person or a family unit in a home environment.

3.1.6 *folding treadmill, n*—a treadmill that is designed with some components that can be moved to allow a more compact, nonusable storage position.

3.1.7 *institutional treadmill, n*—treadmill intended for use by numerous persons in a commercial facility or institution as opposed to home environment.

3.1.8 *intended use, n*—operation in a manner consistent with use described in the owner's manual.

3.1.9 *owner's/user's manual, n*—documentation supplied and intended by the manufacturer to convey information to the owner/user about the treadmill.

3.1.10 *pinch point, n*—location between two moving components or the location between a moving and fixed component that, when entered, causes a portion of the body to become entrapped.

3.1.11 *pull in point, n*—the location between two moving components or the location between a moving and fixed component that, when entered, causes a portion of the body to be pulled into and trapped between the components.

3.1.12 *shear point, n*—location at which parts move past one another, a fixed point, or belt/pulley interfaces, so as to cause a body part to become caught in a scissors action.

3.1.13 *stop mechanism, n*—the device on the treadmill that, when actuated, removes power from the system that drives the moving surface or initiates a controlled stop.

3.1.14 *user support means, n*—see *hand rails*.

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² *Annual Book of ASTM Standards*, Vol 15.07.

³ Available from Underwriters Laboratories Inc., 333 Pfingsten Rd., Northbrook, IL 60062-2096.

