



Trampoline park facilities

Part 1: General safety requirements and test methods



This Australian Standard® was prepared by Committee SF-051, Trampoline Parks. It was approved on behalf of the Council of Standards Australia on 4 October 2018. This Standard was published on 22 October 2018.

The following are represented on Committee SF-051:

- Australian Amusement Association
 - Australian Chamber of Commerce
 - Australian Industry Group
 - Australian Trampoline Park Association
 - Centre for Accident Research and Road Safety—Queensland
 - Consumer Federation of Australia
 - Christian Venues Association
 - Engineers Australia
 - Kidsafe
 - Neuroscience Research Australia
 - SafeWork SA
 - The Sydney Children’s Hospital Network
 - WorkSafe Victoria
-

This Standard was issued in draft form for comment as DR2 AS 5159.1:2018.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard®

Trampoline park facilities

Part 1: General safety requirements and test methods

First published as AS 5159.1:2018.

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Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 76072 197 8

PREFACE

This Standard was prepared by Standards Australia Committee SF-051, Trampoline Parks.

This Standard is Part 1 in a proposed series of standards on trampoline park facilities. The Committee intends to publish a test method for dismount pits as Part 2 of this series.

The objective of this Standard is to provide designers, manufacturers/suppliers, proprietors and operating personnel with requirements and guidance specific to the design, operation and maintenance of trampoline park facilities. This Standard provides minimum safety thresholds so that the likelihood of spinal and other traumatic injuries is reduced as far as reasonably practicable.

Based on the existing injury data, Committee SF-051 recognized that current dismount pit design knowledge and evidence is insufficient. Therefore, further research is required in order to develop evidence-based design requirements and test methods. In the meantime, due to the risk of serious injury it is strongly recommended that a risk assessment of dismount pits, foam pits and/or airbags is conducted by a competent person.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
FOREWORD.....	5
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	6
1.2 NORMATIVE REFERENCES	6
1.3 DEFINITIONS.....	7
SECTION 2 DESIGN AND INSTALLATION	
2.1 GENERAL.....	11
2.2 STRUCTURAL INTEGRITY OF A TRAMPOLINE BED, SUSPENSION SYSTEM AND TRAMPOLINE FRAME.....	11
2.3 MINIMUM TRAMPOLINE BED HEIGHT	12
2.4 SURFACE FINISHES	12
2.5 ENTRAPMENT, CRUSHING AND PROTUSION HAZARDS.....	12
2.6 IMPACT AREA.....	12
2.7 IMPACT ATTENUATION SYSTEMS	13
2.8 FREE SPACE	14
2.9 TRAMPOLINE COURT.....	14
2.10 HIGH PERFORMANCE TRAMPOLINE	15
2.11 INSTALLATION	16
2.12 DOCUMENTATION.....	16
SECTION 3 INSPECTION, TESTING, REPAIRS, MAINTENANCE, ALTERATION AND VERIFICATION	
3.1 GENERAL.....	17
3.2 INSPECTION, TESTING AND REPAIRS.....	17
3.3 MAINTENANCE AND ALTERATION	20
SECTION 4 OPERATIONAL PROCEDURES	
4.1 GENERAL.....	21
4.2 RISK ASSESSMENT	21
4.3 POLICIES AND PROCEDURES	21
4.4 PATRON CAPACITY OF A TRAMPOLINE COURT	21
4.5 SUPERVISION	22
4.6 COMPETENCIES	22
4.7 RULES AND SIGNAGE.....	22
4.8 PATRON BRIEFING	23
4.9 FACILITY OPERATION	23
4.10 FIRST AID	24
4.11 DOCUMENTATION AND RECORD KEEPING	24
APPENDICES	
A TESTING METHODS FOR ENTRAPMENT AND PROTUSIONS.....	25
B TEST METHODS FOR STRUCTURAL INTEGRITY OF A TRAMPOLINE BED, SUSPENSION SYSTEM AND TRAMPOLINE FRAME.....	36
C TEST METHOD FOR NET SYSTEMS USED WITHIN A TPF.....	39
D DETERMINATION OF CRITICAL FALL HEIGHT.....	41
E TEST METHOD FOR PADDING	43
F TEST METHOD FOR BED FOAM	45

	<i>Page</i>
G RISK ASSESSMENT	47
H COMPETENCIES	49
I EXAMPLES OF RISK OF INJURY POSTERS	52
J TEST METHOD FOR CAPACITY OF A TRAMPOLINE COURT	54

FOREWORD

A trampoline park is a venue with multiple trampolines and/or trampoline courts used separately or in conjunction with other apparatus or features such as climbing walls or climbing blocks. A trampoline park is used for amusement, entertainment or recreation by children and adults. The first parks in Australia were opened in 2012 and in 2018 there were more than 80 in Australia and, approximately 500 worldwide.

There are significant differences between domestic trampolines and trampolines used in trampoline parks. Trampolines in trampoline parks are designed, built and used in different ways compared with domestic trampolines. Park trampolines are not generally raised off the ground but built into a frame, meaning that it is not possible to ‘fall off’ the trampoline. Historically, this was the most common cause of injury in domestic trampolines.

An Australian study of paediatric injury data collected over a 6-month period in 2014/15 analysed the presentation of 40 patients (under the age of 17) to the Sydney Children’s Hospital (a Level 1 paediatric trauma centre with approximately 37 000 emergency department presentations per annum) who had sustained injuries as a result of activities at a trampoline park. Injuries most commonly occurred when the child was bouncing on a trampoline alone and landed awkwardly on the bed. Injuries relating to multiple concurrent users of a single trampoline were common where the smaller of the two (or more) users fell as a result of the increased energy transferred from the larger bouncer. Other injuries occurred while attempting somersaults or flips or coming into contact with foreign objects, such as balls, while on the trampoline. The study states that the rise in popularity of trampoline parks has seen a corresponding rise in the number of injuries. While most of the injuries presented were minor, they range in severity, with over 12% requiring operative intervention.

The study found the majority of patients presented with a soft tissue injury or sprain (55%) or fractured bone(s) (37.5%). The lower extremity was the most frequent site of injury (67.5%), followed by the upper extremity (15%).

Trampoline parks have also become very popular with adults who, anecdotally, are more likely to perform more risky manoeuvres.

In industry safety, there is a recognized hierarchy of hazard control measures, based on the principle that hazards should be removed by ‘engineering out’ and that personal protective equipment is the last line of defence. This Standard addresses the physical structure and the management of the trampoline component of the trampoline parks, including associated equipment such as impact areas and bouncing space, but does not address other equipment that may be present in the park, such as climbing walls.

The existence of a Standard alone will not necessarily prevent injuries. Like other physical activities, trampoline use involves the risk of injury, particularly if the equipment is used improperly.

In drafting this Standard, Committee SF-051 was cognisant of finding a balance between the known hazards found within trampoline parks and the benefits to be obtained from their use. The Committee also recognized that they had a duty of care to protect trampoline park patrons from hazards that may not be obvious to the patron. With these factors in mind, the Committee agreed that the Standard should aim to minimize the hazards known to cause injury.

STANDARDS AUSTRALIA

Australian Standard
Trampoline park facilities

Part 1: General safety requirements and test methods

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the minimum requirements for the design, operation, maintenance and inspection of trampoline park facilities (TPF).

This Standard is applicable for indoor, outdoor and mobile trampoline park facilities and related equipment associated with a TPF.

This Standard includes supervision levels, staff and patron training, competencies, information, maintenance and testing of TPF and associated equipment.

This Standard is not applicable to domestic trampolines, bungee trampolines, gymnastic trampolines, trampolines intended for use on water, and inflatable trampolines and/or devices.

1.2 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

AS

1657	Fixed platforms, walkways, stairways and ladders—Design, construction and installation
2321	Short-link chain for lifting purposes
2741	Shackles
3569	Steel wire ropes—Product specification
4100	Steel structures
4989	Trampolines for domestic use—Safety aspects

AS/NZS

1170	Structural design actions
1170.0	Part 0: General principles
1170.1	Part 1: Permanent, imposed and other actions
1170.2	Part 2: Wind actions
1170.3	Part 3: Snow and ice actions
1554	Structural steel welding (series)
1891	Industrial fall-arrest systems and devices
8124	Safety of toys
8124.1	Part 1: Safety aspects related to mechanical and physical properties (ISO 8124.1:2014, MOD)
8124.3	Part 3: Migration of certain elements (ISO 8124-3:2010, MOD)