



Revised American National Standard/
American Dental Association
Standard No. 100

Orthodontic Brackets and Tubes

Identical adoption of ISO 27020:2010, *Dentistry — Brackets and tubes for use in orthodontics*.

ADA American
Dental
Association®
Council on
Scientific Affairs

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REVISED AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION STANDARD NO. 100 FOR ORTHODONTIC BRACKETS AND TUBES

The Council on Scientific Affairs of the American Dental Association has approved revised American Dental Association Standard No. 100 for Orthodontic Brackets and Tubes. This and other standards for dental materials, instruments and equipment are being formulated by working groups of the ADA Standards Committee on Dental Products (formerly Accredited Standards Committee MD156 for Dental Materials, Instruments and Equipment). The Committee has representation from all interests in the United States in the standardization of materials, instruments and equipment in dentistry. The Council has adopted the standards, showing professional recognition of their usefulness in dentistry, and has forwarded them to the American National Standards Institute with a recommendation that the standards be approved as American National Standards. The American National Standards Institute granted approval of revised ADA Standard No. 100 as an American National Standard on November 26, 2012.

The ADA Standards Committee on Dental Products thanks the members of Working Group 1.7 and the organizations with which they were affiliated at the time the standard was developed:

Jerry Horn (chairman), 3M Unitek Corp., Monrovia, CA;
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REVISED AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION STANDARD NO. 100 FOR ORTHODONTIC BRACKETS AND TUBES

FOREWORD

(This Foreword does not form a part of revised ANSI/ADA Standard No. 100 for Orthodontic Brackets and Tubes).

This revised standard is an identical adoption of ISO 27020:2010, Dentistry — Brackets and tubes for use in orthodontics (1st edition). ADA SCDP Working Group No. 1.7 on Orthodontic Products examined the international standard and found it acceptable as an identical adoption for Revised ANSI/ADA Standard No. 100. This standard cancels and replaces ANSI/ADA Standard No. 100 – 2004.

REVISED AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION STANDARD NO. 100 FOR ORTHODONTIC BRACKETS AND TUBES

1 Scope

This standard is applicable to brackets and tubes for use in fixed orthodontic appliances.

This standard gives details of methods to compare the functional dimensions of orthodontic brackets and tubes, the test methods by which they can be determined, as well as packaging and labelling information.

This standard does not specify specific qualitative and quantitative requirements for freedom from biological hazards; which are covered in ISO 10993-1 and ANSI/ADA Standard No. 41.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1942, *Dentistry — Vocabulary*

(Available from the American Dental Association, Department of Standards, 211 E. Chicago Ave., Chicago, IL 60611 or <http://catalog.ada.org>.)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942 and the following apply.

3.1

angle of torque

θ

occlusal-gingival angle formed between the intersection of the line perpendicular to the tangent to the tooth side surface of the base and the line bisecting the slot in the occlusal-gingival direction, when viewed along the mesial-distal long-axis of the slot

NOTE If the angle is oriented toward the occlusal (gingival), it is designated as positive (negative).

See Figure 1.

3.2

angulation

α

angle between the line perpendicular to the mesial-distal long-axis of the slot and the central occlusal-gingival axis of the bracket/tube, when viewed from the buccal/labial

NOTE The angulation is positive (negative) when the gingival part of the central occlusal-gingival axis is inclined toward the distal (mesial) relative to the line perpendicular to the mesial-distal long-axis of the slot.

See Figure 2.

3.3

archwire

wire that is formed approximately to the shape of the dental arch

3.4

auxiliary slot

additional opening in the bracket or tube for insertion of auxiliary elements

3.5

auxiliary slot dimensions

diameter/cross-sectional dimensions of the largest wire that passes through an auxiliary slot

3.6

band

structural annular component affixed to the outer circumference of the crown of a tooth and to which a bracket or tube can be attached

3.7

base

part of the bracket or the tube that is attached to the enamel or band

3.8

descriptor

code to identify the nominal slot height in thousandths of an inch without unit designation, in accordance with accepted orthodontic practice (e.g. 18 or 22)

3.9

bracket

tube

structural unit attached to a band or base that is capable of retaining an archwire

3.10 in-out

3.10.1

bracket in-out

l_i

distance between the floor of the slot and the tooth side surface of the base along the intersection of the plane perpendicular to mesial-distal long-axis of the slot in the center of the bracket slot and the plane bisecting the slot in the occlusal-lingual direction, when viewed along the mesial-distal long-axis of the slot

See Figure 3 a).

3.10.2

tube in-out

l_i

distance between the floor of the slot and the tooth side surface of the base, at the mesial end of the tube and in the midplane of the slot in the occlusal-lingual direction; for tubes with a mesial chamfer, the in-out is the distance at the mesial end of the tube between that part of the floor of the slot in contact with the largest dimension of an archwire (round wire for a