



American National Standard/  
American Dental Association  
Specification No. 100

# Orthodontic Brackets and Tubes



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

The Council on Scientific Affairs of the American Dental Association has approved American Dental Association Specification No.100 for Orthodontic Brackets and Tubes. This and other specifications 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 specifications, showing professional recognition of their usefulness in dentistry, and has forwarded them to the American National Standards Institute with a recommendation that the specifications be approved as American National Standards. The American National Standards Institute granted approval of ADA Specification No. 100 as an American National Standard on August 25, 2004.

The Council thanks the working group members and the organizations with which they were affiliated at the time the specification was developed:

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**FOREWORD**

(This Foreword does not form a part of ANSI/ADA Specification No. 100).

Working group 1.7 on Orthodontic Products of Subcommittee 1 of the ADA Standards Committee on Dental Products reviewed DIN #13972 1964 with the purpose incorporating it. The majority of the working group could not accept the DIN as presently constituted.

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

### 1 SCOPE

This specification pertains to brackets and tubes as components of the orthodontic appliance.

### 2 DEFINITIONS

- 2.1 **Angulation:** angle between the perpendicular to the slot and the central occluso-gingival axis of the attachment. By convention, the angulation is positive (negative) when the mesial (distal) end of the slot is inclined toward the occlusal.
- 2.2 **Archwire:** a wire that is preformed approximately to the shape of the dental arch. The wire can span the whole arch or only a part of the arch.
- 2.3 **Band:** a structural component affixed to the perimeter of the tooth crown and to which a bracket or tube or sheath may be attached.
- 2.4 **Base:** the part of the bracket or the buccal tube assembly that is attached to the enamel.
- 2.5 **Bracket/Tube assembly:** the bracket or tube with a base or band.
- 2.6 **Descriptive name:** the nominal height of the slot of the bracket or tube stated in mils, consistent with accepted orthodontic terminology. (One mil = 0.001 inch.)
- 2.7 **Product family:** a group of bracket or tube assemblies having common design features.
- 2.8 **In-Out:** the dimension that is the smallest distance between the bottom of the archwire slot at the line *g* that bisects the slot and the base of the bracket or tube assembly (Fig. 4).
- 2.9 **Rotational offset:** the angle in the plane perpendicular to the occluso-gingival direction between the bottom of the archwire slot and the line that connects the tooth side of the mesial and distal extents of the tube or bracket. (The offset is termed "distal" if the distal extent of the base from the bottom of the slot is further from the tube than its mesial extent).
- 2.10 **Slot:** a mesio-distally oriented opening in the bracket or tube primarily for insertion of an archwire.
- 2.11 **Slot depth:** the smallest dimension to the bottom of the slot.
- 2.12 **Slot length:** the mesio-distal dimension of the slot.
- 2.13 **Slot height:** the smallest dimension of the slot between the sides at one-half of the slot depth.
- 2.14 **Torque:** the angle in the mesio-distal plane of the bracket that is perpendicular to the slot, between the mid-height line of the slot and a line perpendicular to a tangent to the base. The two lines defining