



Designation: F 786 – 82 (Reapproved 1991)

Standard Specification for Metallic Bone Plates¹

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This standard has been approved for use by agencies of the Department of Defense. Consult the DoD Index of Specifications and Standards for the specific year of issue which has been adopted by the Department of Defense.

1. Scope

1.1 This specification covers functional dimensions, tolerances, and materials for bone plates intended for use as orthopedic fixation implants.

1.2 The values stated in inch-pound units are to be regarded as the standard and SI (metric) equivalents are approximate.

2. Referenced Documents

2.1 ASTM Standards:

- F 55 Specification for Stainless Steel Bar and Wire for Surgical Implants²
- F 56 Specification for Stainless Steel Sheet and Strip for Surgical Implants²
- F 67 Specification for Unalloyed Titanium for Surgical Implant Applications²
- F 75 Specification for Cast Cobalt-Chromium-Molybdenum Alloy for Surgical Implant Applications²
- F 86 Practice for Surface Preparation and Marking of Metallic Surgical Implants²
- F 90 Specification for Wrought Cobalt-Chromium-Tungsten-Nickel Alloy for Surgical Implant Applications²
- F 136 Specification for Wrought Titanium 6Al-4V ELI Alloy for Surgical Implant Applications²
- F 138 Specification for Stainless Steel Bars and Wire for Surgical Implants (Special Quality)²
- F 139 Specification for Stainless Steel Sheet and Strip for Surgical Implants (Special Quality)²
- F 367 Specification for Holes and Slots for Inch Cortical Bone Screws²
- F 382 Test Method for Static Bending Properties of Metallic Bone Plates²
- F 543 Specification for Cortical Bone Screws²
- F 565 Practice for Care and Handling of Orthopedic Implants and Instruments²
- F 620 Specification for Titanium 6Al-4V ELI Alloy Forgings for Surgical Implants²
- F 621 Specification for Stainless Steel Forgings for Surgical Implants²

¹ This specification is under the jurisdiction of ASTM Committee F-4 on Medical and Surgical Materials and Devices and is the direct responsibility of Subcommittee F04.02.02 on Metallurgical Materials.

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² Annual Book of ASTM Standards, Vol 13.01.

3. Materials and Testing

3.1 Bone plates shall be fabricated from material conforming to one of the following ASTM Specifications: F 55, F 56, F 67, F 75, F 90, F 136, F 138, and F 139.

3.1.1 Bone plates of forged Specification F 136 shall meet the requirements of Specification F 620.

3.1.2 Bone plates of forged Specification F 55 or Specification F 138 shall meet the requirements of Specification F 621.

4. Performance Considerations

4.1 Bone plates may be tested using Recommended Practice F 382.

4.2 Factors considered to be important, but for which values and test methods have not been established, are bending strength, fatigue strength, ductility, and bending rigidity.

5. Dimensions and Characteristics

5.1 Bone plates shall be fabricated in accordance with the dimensions and tolerances shown in Figs. 1 and 2.

5.2 Bone plates shall have no sharp exterior edges.

5.3 Bone plates shall have surfaces prepared and shall be marked using a method specified in accordance with Practice F 86.

5.3.1 Markings on the bone plate shall identify the manufacturer or distributor and shall be near the ends of the plate and away from the most highly stressed area, where possible.

5.4 Dimensions and tolerances for screw holes and screw slots in bone plates shall conform to Specification F 367, for use with bone screws per Specification F 543, Table 1.

6. Packaging and Labeling

6.1 Packaging shall be adequate to protect the bone plate during shipment.

6.2 Labeling for bone plates shall include the following:

6.2.1 Product name,

6.2.2 Size, and on the immediate container:

6.2.2.1 Length,

6.2.2.2 Width,

6.2.2.3 Thickness,

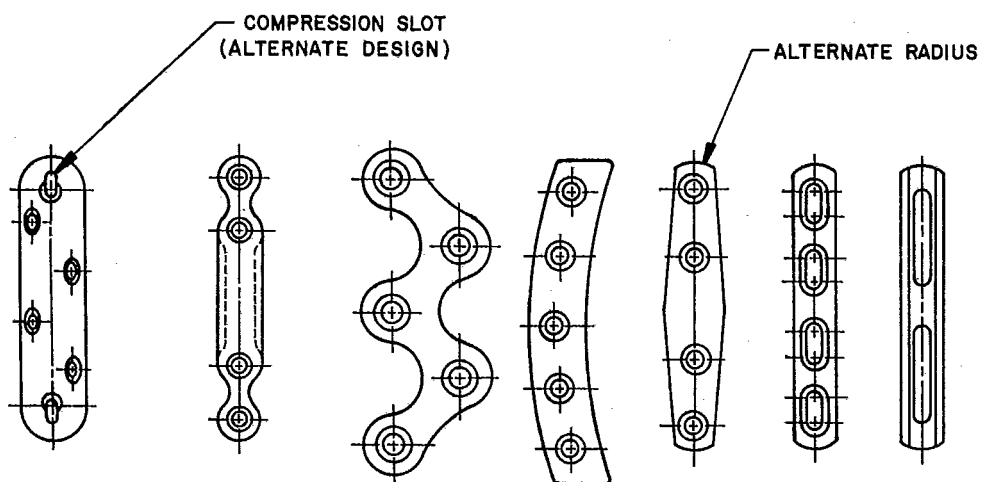
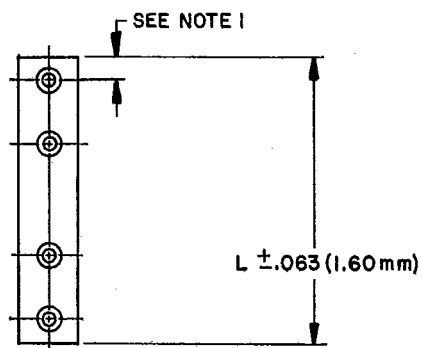
6.2.2.4 Number of screw holes,

6.2.2.5 Diameter of screw holes and

6.2.3 ASTM Specification Designation Number.

6.3 Bone plates shall be cared for and handled in accordance with Practice F 565.

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NOTE 1—Location of all screw holes or slots from centerline or end of plate is optional. Screw hole or slot centerline location shall be no less than one hole diameter from edge of plate.

NOTE 2—Above configurations are to be considered typical and are not all-inclusive.

NOTE 3—Hole or slot, number and location are optional.

FIG. 1 Bone Plate Configurations