



Designation: F 1613 – 95 (Reapproved 2008)

Standard Specification for Surgical Tissue/Dressing/Pick-Up Forceps (Thumb Type)¹

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1. Scope

1.1 This specification covers general workmanship aspects of spring-action, tissue, dressing, or pick-up forceps (thumb-type) intended for the retraction, grasping, or dissection of tissue during surgical procedures.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 *ASTM Standards*:²

E 18 Test Methods for Rockwell Hardness of Metallic Materials

E 92 Test Method for Vickers Hardness of Metallic Materials

E 140 Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, and Scleroscope Hardness

F 899 Specification for Wrought Stainless Steels for Surgical Instruments

F 921 Terminology Relating to Hemostatic Forceps

F 1026 Specification for General Workmanship and Performance Measurements of Hemostatic Forceps

F 1089 Test Method for Corrosion of Surgical Instruments

F 1638 Terminology for Surgical Tissue/Dressing/Pick-Up Forceps (Thumb-Type)

3. Terminology

3.1 *Definitions*—Definitions shall be in accordance with Terminology F 1638.

3.1.1 *modified working ends*—working surfaces possessing superior hardness characteristics that are the result of either depositing various materials on the base metal or securing an insert permanently (such as by brazing) to the base metal (see Note 3).

4. Material

4.1 All component parts of the instrument shall be fabricated from Class 4 martensitic stainless steel in accordance with Specification F 899. The modified working ends may be of stellite, tungsten carbide, or other suitable material.

5. Requirements

5.1 *Heat Treatment and Hardness for Component Parts*:

5.1.1 The stainless steel component parts shall be heat treated under conditions recommended for the material used.

5.1.2 The Rockwell hardness (HRC) of the instrument with the working end not modified shall be 40–49 HRC after appropriate processing. Instruments in which the working end has been modified shall have an HRC of A77.

5.2 *Corrosion Resistance*—Instruments shall be subjected to corrosion tests as specified in Test Method F 1089.

5.3 *Finish*:

5.3.1 *Surfaces*—Surfaces of the instruments shall be uniformly finished and free of burrs, sharp edges, cracks, coarse marks, and processing materials.

5.3.2 *Type*—The finish shall be one of the types specified in Definitions F 921 or as specified by the purchaser.

5.4 *Workmanship*:

5.4.1 *Symmetry*—Excluding functional differences, both forceps halves shall be symmetrical.

5.4.2 *Teeth*—Teeth shall be well formed, uniform in depth and spacing, and mesh without binding, unless designed otherwise.

¹ This specification is under the jurisdiction of ASTM Committee F04 on Medical and Surgical Materials and Devices and is the direct responsibility of Subcommittee F04.33 on Medical/Surgical Instruments.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.