



Standard Specification for Stainless Steel Socket Button and Flat Countersunk Head Cap Screws (Metric)¹

This standard is issued under the fixed designation F879M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 This specification covers the chemical and mechanical requirements for stainless steel metric hexagon socket button (SBHCS) and flat countersunk (SFHCS) head cap screws with nominal thread M 3 through M 20 intended for use in applications requiring general corrosion resistance.

1.2 The following three property classes are covered:

1.2.1 Austenitic Class A1-50 in an annealed condition at 585 MPa maximum,

1.2.2 Austenitic Class A1-55 in a cold worked condition at 550 MPa minimum, and

1.2.3 Austenitic Class A1-70 in a cold-worked condition at 700 MPa minimum.

1.3 *Units*—The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 The following hazard caveat pertains only to Section 12, Test Methods: *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards*:²

A262 Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels

A342/A342M Test Methods for Permeability of Weakly Magnetic Materials

A380/A380M Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems

¹ This specification is under the jurisdiction of ASTM Committee F16 on Fasteners and is the direct responsibility of Subcommittee F16.04 on Nonferrous Fasteners.

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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.

A555/A555M Specification for General Requirements for Stainless Steel Wire and Wire Rods

A751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products

A967/A967M Specification for Chemical Passivation Treatments for Stainless Steel Parts

D3951 Practice for Commercial Packaging

E18 Test Methods for Rockwell Hardness of Metallic Materials

E92 Test Methods for Vickers Hardness and Knoop Hardness of Metallic Materials

E384 Test Method for Microindentation Hardness of Materials

F606M Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, and Rivets (Metric)

F738M Specification for Stainless Steel Metric Bolts, Screws, and Studs (Withdrawn 2014)³

F788 Specification for Surface Discontinuities of Bolts, Screws, and Studs, Inch and Metric Series

F1470 Practice for Fastener Sampling for Specified Mechanical Properties and Performance Inspection

2.2 *ISO Standards*:⁴

ISO 7380–1 Button head screws-Part 1: Hexagon socket button head screws

ISO 10642 Hexagon socket countersunk head screws

3. Classification

3.1 The designation of the property class and conditions of this specification shall be consistent with the stainless steel designations in Specification F738M.

3.2 The austenitic stainless steel socket screw shall be designated F879M A1-50, F879M A1-55, or F879M A1-70.

4. Ordering Information

4.1 Orders for material under this specification shall include the following information:

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from International Organization for Standardization (ISO), ISO Central Secretariat, BIBC II, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <http://www.iso.org>.

*A Summary of Changes section appears at the end of this standard