



Standard Specification for Turnbuckles, Swaged, Welded, Forged¹

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1. Scope

1.1 This specification covers swaged welded, cast, or forged turnbuckles with and without jam nuts.

1.2 A turnbuckle is an internally threaded loop or sleeve intended for assembly with a threaded stud, eye, hook, or jaw at each end, used for applying tension to rods, wire rope, etc.

1.3 The values stated in inch-pound units are to be regarded as standard. The SI units given in parentheses are for information purposes only and may be approximate.

1.4 *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:

- A 29 Specification for Steel Bars, Carbon and Alloy, Hot-Wrought and Cold-Finished, General Requirements for²
- A 153 Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware³
- B 633 Specification for Electrodeposited Coatings of Zinc on Iron and Steel⁴
- D 3951 Practice for Commercial Packaging⁵

2.2 AWS Standards:⁶

- A5.1 Covered Carbon Steel Arc Welding Electrodes
- A5.2 Iron and Steel Oxyfuel Gas Welding Rods
- A5.5 Low Alloy Steel Covered Arc Welding Electrodes

2.3 ANSI Standards:⁷

- B1.1 Unified Inch Screw Threads (UN and UNR Thread Form)
- B18.2.2 Square and Hex Nuts

2.4 Military Standards:⁸

- MIL-STD-1186 Cushioning, Anchoring, Bracing, Blocking, and Waterproofing; with Appropriate Test Methods
- MIL-STD-2073-1 DoD Material Procedures for Development and Application of Packaging Requirements

2.5 Military Specification:⁸

- MIL-P-116 Preservation, Methods of
- MIL-L-19140 Lumber and Plywood, Fire-Retardant Treated

2.6 Federal Specifications:⁷

- PPP-B-636 Boxes, Shipping, Fiberboard
- PPP-F-320 Fiberboard: Corrugated and Solid Sheet Stock (Container Grade) and Cut Shapes

2.7 Federal Standard:⁸

- FED-STD-123 Marking for Shipment (Civil Agencies)

3. Classification

3.1 Turnbuckles covered under this specification shall be of the following types and grades, as specified (see 4.1.3 and 4.1.7):

3.1.1 Type I—Open turnbuckle bodies (see 5.2.4–5.2.7) Grade

- 1 Forged
- 2 Spread
- 3 Resistance welded
- 4 Arc or gas welded

3.1.2 Type II—Pipe turnbuckle bodies (see 5.2.8).

3.1.3 Type III—Rigging turnbuckle bodies (see 5.2.9).

3.2 Turnbuckles covered under this specification shall be of the following classes and sizes, as specified (see 4.1.3):

3.2.1 Classes:

A—turnbuckle, body only without end pulls, heads not drilled.

B—turnbuckle, body only without end pulls, heads threaded right and left hand.

C—turnbuckle with stub and stub end pulls, complete.

D—turnbuckle with eye and eye end pulls, complete.

E—turnbuckle with hook and hook end pulls, complete.

F—turnbuckle with hook and eye end pulls, complete.

G—turnbuckle with jaw and jaw end pulls, complete.

H—turnbuckle with jaw and eye end pulls, complete.

3.2.1.1 The arrangement of turnbuckle bodies and end pulls for Classes C, D, E, F, G, and H shall be similar to Fig. 1.

¹ This specification is under the jurisdiction of ASTM Committee F-25 on Shipbuilding and is the direct responsibility of Subcommittee F25.07 on General Requirements.

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² Annual Book of ASTM Standards, Vol 01.05.

³ Annual Book of ASTM Standards, Vol 01.06.

⁴ Annual Book of ASTM Standards, Vol 02.05.

⁵ Annual Book of ASTM Standards, Vol 15.09.

⁶ Available from American Welding Society, 550 NW LeJeune Road, Miami, FL 33126.

⁷ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

⁸ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.