



Designation: A952/A952M – 02 (Reapproved 2016)

Standard Specification for Forged Grade 80 and Grade 100 Steel Lifting Components and Welded Attachment Links¹

This standard is issued under the fixed designation A952/A952M; 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 requirements for forged alloy steel lifting components and welded coupling and master links for Grade 80 and Grade 100 alloy chain slings as described in Specification [A906/A906M](#).

1.2 Two grades of components and welded links are covered:

1.2.1 Grade 80.

1.2.2 Grade 100.

1.3 This specification is a performance standard. Other standards apply to use of these products. Some of these standards are: OSHA 1910.184, ASME B30.9, and ASME B30.10.

1.4 The values stated in either inch-pound or SI units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the specification.

2. Referenced Documents

2.1 *ASTM Standards*:²

[A29/A29M Specification for General Requirements for Steel Bars, Carbon and Alloy, Hot-Wrought](#)

[A391/A391M Specification for Grade 80 Alloy Steel Chain](#)

[A751 Test Methods and Practices for Chemical Analysis of Steel Products](#)

[A906/A906M Specification for Grade 80 and Grade 100 Alloy Steel Chain Slings for Overhead Lifting](#)

[A973/A973M Specification for Grade 100 Alloy Steel Chain](#)

[E4 Practices for Force Verification of Testing Machines](#)

[E44 Definitions of Terms Relating to Heat Treatment of Metals \(Withdrawn 1993\)](#)³

[E165/E165M Practice for Liquid Penetrant Testing for General Industry](#)

[E709 Guide for Magnetic Particle Testing](#)

2.2 *Other Standards*:

[OSHA 1910.184 Slings](#)⁴

[ASME B30.9 Slings](#)⁵

[ASME B30.10 Hooks](#)⁵

3. Terminology

3.1 *Definitions of Terms Specific to This Standard*:

3.1.1 *breaking force, minimum*—the minimum force in pounds or newtons at which the component has been found by verification testing to break when a constantly increasing force was applied in direct tension. This test is a manufacturer's design verification test and shall not be used as criteria for service.

3.1.2 *chain sling*—an assembly consisting of alloy steel chain joined to upper and lower end components for attaching loads to be lifted by a crane or lifting machine.

3.1.3 *coupling link*—a link fitted to the end of the chain to connect to another component of the sling. See [Fig. 1](#).

3.1.4 *master link*—a link used as an upper end component of a chain sling and by means of which the sling may be attached to a crane or other device. See [Fig. 1](#).

3.1.5 *master coupling link (secondary or intermediate link)*—a link used on three and four leg slings to connect the legs to a master link. See [Fig. 1](#).

3.1.6 *proof test*—a quality control tensile test applied to components for the purpose of verifying manufacturing and material quality. It is the minimum force in pounds or newtons which the component has withstood at the time it left the

¹ This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.27 on Steel Chain.

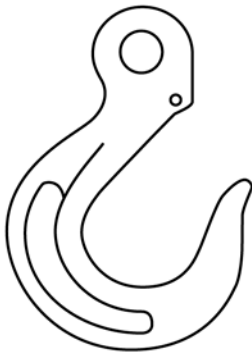
Current edition approved Sept. 1, 2016. Published September 2016. Originally approved in 1996. Last previous edition approved in 2010 as A952/A952M-02(2010). DOI: 10.1520/A0952_A0952M-02R16.

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.

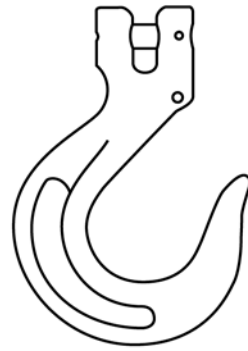
³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from Occupational Safety and Health Administration (OSHA), 200 Constitution Ave., NW, Room Number N3626, Washington, DC 20210, <http://www.osha.gov>.

⁵ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Two Park Ave., New York, NY 10016-5990, <http://www.asme.org>.



Class ESH
Eye Sling Hook



Class CSH
Clevis Sling Hook



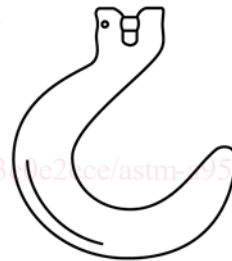
Class EGH
Eye Grab Hook



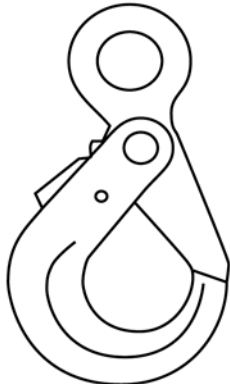
Class CGH
Clevis Grab Hook



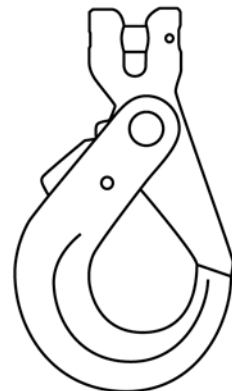
Class EFH
Eye Foundry Hook



Class CFH
Clevis Foundry Hook

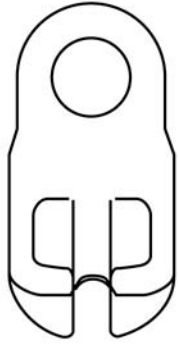


Class ESLH
Eye Self-Locking Hook

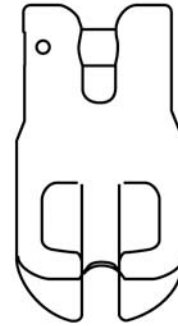


Class CSLH
Clevis Self-Locking Hook

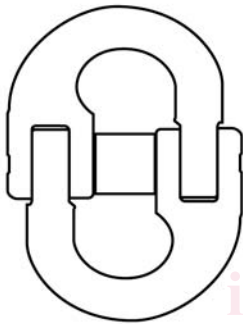
FIG. 1 General Component Configuration



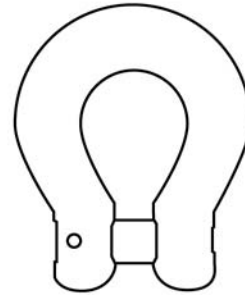
Class ECGH
Eye Claw Grab Hook



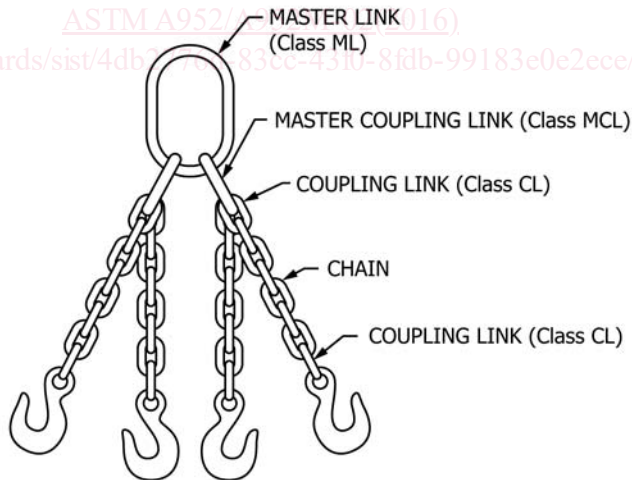
Class CCGH
Clevis Claw Grab Hook



Class CLM
Coupling Link, Mechanical



Class CCL
Clevis Coupling Link



Class ML, MCL, CL
Master Link, Master Coupling Link, Coupling Link

FIG. 1 General Component Configuration (continued)