



UL 14C

STANDARD FOR SAFETY

Swinging Hardware for Standard Tin-Clad Fire
Doors Mounted Singly and in Pairs

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UL Standard for Safety for Swinging Hardware for Standard Tin-Clad Fire Doors Mounted Singly and in Pairs, UL 14C

Eighth Edition, Dated October 27, 2006

Summary of Topics

Revision pages have been issued for the Standard for Swinging Hardware for Standard Tin-Clad Fire Doors Mounted Singly and in Pairs, UL 14C, to reflect the reaffirmation of the ANSI approval. No changes in requirements have been made.

The revisions are substantially in accordance with Proposal(s) on this subject dated March 8, 2013.

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The requirements in this Standard are now in effect, except for those paragraphs, sections, tables, figures, and/or other elements of the Standard having future effective dates as indicated in the note following the affected item. The prior text for requirements that have been revised and that have a future effective date are located after the Standard, and are preceded by a "SUPERSEDED REQUIREMENTS" notice.

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OCTOBER 27, 2006
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ANSI/UL 14C-2008 (R2013)

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UL 14C

Standard for Swinging Hardware for Standard Tin-Clad Fire Doors

Mounted Singly and in Pairs

First Edition – March, 1917
Second Edition – May, 1943
Third Edition – September, 1968
Fourth Edition – June, 1973
Fifth Edition – January, 1979
Sixth Edition – December, 1993
Seventh Edition – January, 1999

Eighth Edition

October 27, 2006

This ANSI/UL Standard for Safety consists of the Eighth edition including revisions through May 3, 2013.

The most recent designation of ANSI/UL 14C as an American National Standard (ANSI) occurred on May 3, 2013. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, or effective date information.

The Department of Defense (DoD) has adopted UL 14C on October 29, 1984. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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APPENDIX A**APPENDIX B**

INTRODUCTION

1 Scope

1.1 These requirements apply to hardware for swinging fire doors which have demonstrated in fire tests fire-resistive properties warranting their use with two-ply and three-ply tin-clad fire doors tested in accordance with the Standard for Fire Tests of Door Assemblies, UL 10B (NFPA No. 252).

1.1 revised December 15, 2008

1.2 Requirements for the location and time rating required for fire doors are contained in the International Building Code (IBC). Requirements for the installation of swinging two-ply and three-ply tin-clad fire doors are included in the Standard for Fire Doors and Other Opening Protectives, NFPA No. 80.

1.2 revised December 15, 2008

1.3 The hardware included in these requirements is intended for mounting standard two-ply and three-ply tin-clad swinging fire doors for protection of openings not exceeding the dimensions for the hourly classifications indicated in Table 1.1.

Table 1.1
Limitations in types and dimensions

Type of door	Maximum area,		Maximum width,		Maximum height,		Hourly rating or class designation
	square feet	(m ²)	feet	(m)	feet	(m)	
3-ply, single	—	—	6	1.8	12	3.6	3, 1-1/2, 1, 3/4
3-ply, in pairs	—	—	10	3.1	12	3.6	3, 1-1/2, 1, 3/4
2-ply, single	—	—	6	1.8	10	3.1	1-1/2, 1, 3/4
2-ply, in pairs	80	7.4	10	3.1	10	3.1	1-1/2, 1, 3/4

1.4 These requirements do not cover automatic releasing or closing mechanisms.

1.5 Deleted December 15, 2008

2 Units of Measurement

2.1 When a value for measurement is followed by a value in other units in parentheses, the second value is only approximate. The first stated value is the requirement. SI units as employed are in accordance with the Standard for Practice for Use of the International System of Units (SI) (the Modernized Metric System) ASTM E380-91a.

2.2 The tolerance for all dimensions shall be as specified with the dimension. Where no tolerance is shown, the tolerances specified in Appendix B shall apply. See Appendix B for specifications.

3 Undated References

3.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

CONSTRUCTION

4 General

4.1 Each complete set of hardware for swinging tin-clad fire doors shall include:

- a) For Doors Mounted Singly – Wall strips, except for openings supplied with standard steel frames, hinge brackets, hinge straps, latch straps, latch catches, connecting bar, operating handle mechanism, latch spring, and required washers, rivets, and bolts to mount hardware on the door and wall.
- b) For Doors Mounted in Pairs – In addition to the above members, top and bottom bolts and top and bottom 1/2 keepers for standing doors.

4.2 All hardware parts shall be made of wrought or malleable iron or steel.

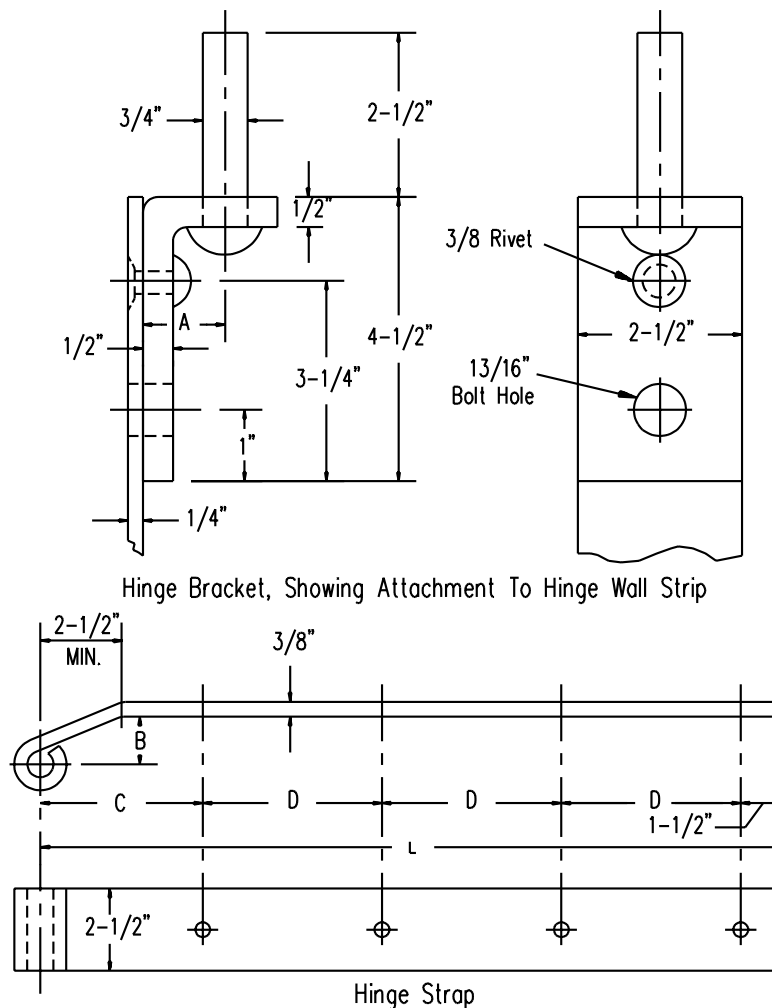
4.3 The number and spacing of hinges and latches depend on the door sizes. See Tables 5.1 and 5.2.

5 Hinges for Doors Mounted Singly and in Pairs

5.1 Hinge straps

5.1.1 A hinge strap shall be made of steel 2-1/2 inches (64 mm) wide and 3/8 inch (9.5 mm) thick, shall have an eye 13/16 inch (20.6 mm) in diameter in one end, and shall be provided with bolt holes 7/16 inch (11.1 mm) in diameter at not more than 12 inch (305 mm) centers. The first hole shall be located not more than 6 inches (152 mm) from the center of the hinge eye, and the last hole shall be located at not exceeding 1-1/2 inches (38 mm) from the opposite end and shall be offset at the hinge eye as shown in Figure 5.1.

Figure 5.1
Hinge strap and hinge bracket and bolt details

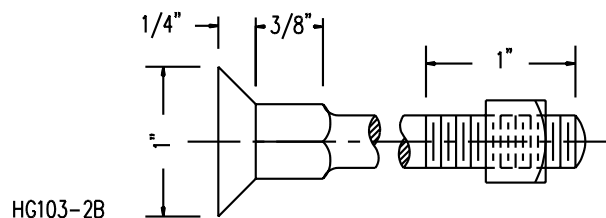


A = $\begin{cases} 1-3/8 \text{ inches for 3-ply doors} \\ 1 \text{ inch for 2-ply doors} \end{cases}$
 B = $\begin{cases} 1-1/8 \text{ inches for 3-ply doors} \\ 3/4 \text{ inch for 2-ply doors} \end{cases}$

C = Not over 6 inches
 D = Not over 12 inches
 L = See Table 5.2

Hinge Strap and Hinge Bracket, Showing Attachment to Hinge Wall Strip.

Hinge Strap Bolt



Note: See Appendix A for SI Equivalents.

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