ANSI/SDI A250.8

Revised August 2017

Specifications for Standard Steel Doors & Frames

ANSI/SDI A250.8 - 2017

- This standard was founded over 40 years ago as **SDI-100** and then adopted as **ANSI/SDI A250.8**
- As the cornerstone standard of SDI, it establishes the performance levels for doors and frames that architects can expect to receive from SDI member manufacturers
- This standard is reviewed every five years as part of the standard ANSI revision process and updated with current terminology
- As technology has improved, the standard has been updated to reference new testing methods

Description of A250.8

This standard provides:

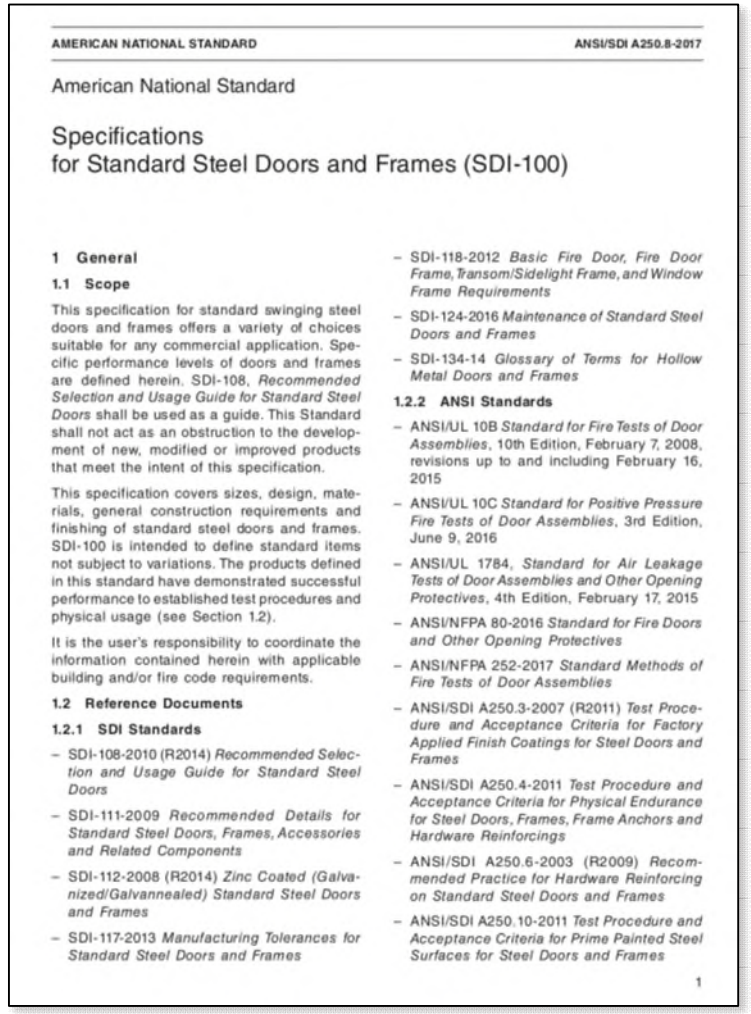
1. A single document summarize the performance levels of doors and frames that specifiers can expect from a product bearing the SDI logo
2. Assurance to architects specifying **ANSI/SDI A250.8** that they are receiving a product that is well-constructed, tested, and evaluated to meet the specifications within that standard
3. Assistance to architects, specifiers, end-users and others with matching the performance parameters of their application to the appropriate steel door and frame specification

A250.8 Overview

- **ANSI/SDI A250.8** covers sizes, design, materials, general construction requirements and finishing of standard steel doors and frames

- Products defined in this standard have demonstrated successful performance to established test procedures and physical usage

- All information contained in this standard must be coordinated with applicable building and/or fire code requirements



AMERICAN NATIONAL STANDARD ANSI/SDI A250.8-2017

American National Standard

Specifications
for Standard Steel Doors and Frames (SDI-100)

1 General

1.1 Scope

This specification for standard swinging steel doors and frames offers a variety of choices suitable for any commercial application. Specific performance levels of doors and frames are defined herein. SDI-108, *Recommended Selection and Usage Guide for Standard Steel Doors* shall be used as a guide. This Standard shall not act as an obstruction to the development of new, modified or improved products that meet the intent of this specification.

This specification covers sizes, design, materials, general construction requirements and finishing of standard steel doors and frames. SDI-100 is intended to define standard items not subject to variations. The products defined in this standard have demonstrated successful performance to established test procedures and physical usage (see Section 1.2).

It is the user's responsibility to coordinate the information contained herein with applicable building and/or fire code requirements.

1.2 Reference Documents

1.2.1 SDI Standards

- SDI-108-2010 (R2014) *Recommended Selection and Usage Guide for Standard Steel Doors*
- SDI-111-2009 *Recommended Details for Standard Steel Doors, Frames, Accessories and Related Components*
- SDI-112-2008 (R2014) *Zinc Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames*
- SDI-117-2013 *Manufacturing Tolerances for Standard Steel Doors and Frames*
- SDI-118-2012 *Basic Fire Door, Fire Door Frame, Transom/Sidelight Frame, and Window Frame Requirements*
- SDI-124-2016 *Maintenance of Standard Steel Doors and Frames*
- SDI-134-14 *Glossary of Terms for Hollow Metal Doors and Frames*

1.2.2 ANSI Standards

- ANSI/UL 10B *Standard for Fire Tests of Door Assemblies*, 10th Edition, February 7, 2008, revisions up to and including February 16, 2015
- ANSI/UL 10C *Standard for Positive Pressure Fire Tests of Door Assemblies*, 3rd Edition, June 9, 2016
- ANSI/UL 1784, *Standard for Air Leakage Tests of Door Assemblies and Other Opening Protectives*, 4th Edition, February 17, 2015
- ANSI/NFPA 80-2016 *Standard for Fire Doors and Other Opening Protectives*
- ANSI/NFPA 252-2017 *Standard Methods of Fire Tests of Door Assemblies*
- ANSI/SDI A250.3-2007 (R2011) *Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames*
- ANSI/SDI A250.4-2011 *Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frame Anchors and Hardware Reinforcings*
- ANSI/SDI A250.6-2003 (R2009) *Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames*
- ANSI/SDI A250.10-2011 *Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames*

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A250.8 Overview

The standard lists levels and criteria to help the architect avoid under- and over-specifying:

- Under-specifying requirements increases life-cycle costs as openings have to be replaced
- Over-specifying requirements adds unneeded costs in the construction of a project

Table 1 – Standard opening sizes

Widths*

Ft-in	2'0"	2'4"	2'6"	2'8"	2'10"	3'0"	3'4"	3'6"	3'8"	3'10"	4'0"
mm	610	711	762	813	864	914	1016	1067	1118	1168	1219

* Sizes shown are for single doors only; equal pairs of doors use twice the width indicated. Pairs of doors can consist of two unequal widths.

Heights

1-¾" Doors	Ft-in	6'8"	7'0"	7'2"	7'10"	8'0"
	mm	2032	2134	2184	2388	2438

1-⅜" Doors	Ft-in	6'8"	7'0"	7'2"
	mm	2032	2134	2184

Table 2 – Steel thickness / door faces

Level	Model	Minimum Thickness		MSG No. (1)
		Inches	mm	
1	1	0.032	0.8	20
	2	0.032	0.8	20
2	1	0.042	1.0	18
	2	0.042	1.0	18
3	1	0.053	1.3	16
	2	0.053	1.3	16
	3	See Sec. 2.3.3 Construction Features		16
4	1	0.067	1.7	14
	2	0.067	1.7	14

(1) MSG No. to be used for reference purposes only.

A250.8 Overview

The standard also provides comprehensive guidelines for:

- Hardware preparation and locations
- Storage, handling, and installation of doors and frames
- Door and frame maintenance

Table 5 – Hardware locations

Locks, Latches, Roller Latches and Double Handle Sets		38" – 42" (965 mm – 1067 mm) Centerline of Lock Strike from Bottom of Frame
Rim and Mortise Panic Devices		
Cylindrical and Mortise Deadlocks [1]		48" (1219 mm) to Centerline of Strike from Bottom of Frame
Push Plates		Centerline 45" (1143 mm) from Bottom of Frame
Pull Plates		Centerline of Grip @ 42" (1067) from Bottom of Frame
Combination Push Bar		Centerline of 42" (1067 mm) from Bottom of Frame
Hospital Arm Pull		Centerline of Lower Base is 45" (1143 mm) from Bottom of Frame with Grip Open at Bottom
Hinges	Top	Up to 11-¾" (298.5 mm) from Rabbet Section of Frame to Centerline of Hinge
	Bottom	Up to 13" (330.2 mm) from Bottom of Frame to Centerline of Hinge
	Intermediate	Equally Spaced Between Top and Bottom Hinges

[1] Cylindrical and Mortise Deadlock strikes shall be located at 48" (1219 mm) from the bottom of the frame unless otherwise specified.

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