

NFPA®

105

**Standard for
Smoke Door Assemblies and
Other Opening Protectives**

2019



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NFPA® 105

Standard for

Smoke Door Assemblies and Other Opening Protectives

2019 Edition

This edition of NFPA 105, *Standard for Smoke Door Assemblies and Other Opening Protectives*, was prepared by the Technical Committee on Fire Doors and Windows. It was issued by the Standards Council on May 4, 2018, with an effective date of May 24, 2018, and supersedes all previous editions.

This edition of NFPA 105 was approved as an American National Standard on May 24, 2018.

Origin and Development of NFPA 105

This publication is the result of a multiyear project by the Technical Committee on Fire Doors and Windows and is based on the acknowledgment that smoke is the principal killer in destructive fires. Historically, fire doors have been permitted to have such clearances and deflections as would permit the passage of relatively great quantities of smoke. Those fire doors, when properly installed, have proven to be adequate barriers against the passage of fire, but improvement was needed to protect against the passage of smoke.

The first (1985) edition of NFPA 105 was a recommended practice and introduced parameters for door performance that would limit smoke spread through a door opening.

The third (1993) edition incorporated new information recognizing that smoke control doors in buildings protected by automatic sprinklers would have substantially lower pressures created by a potential fire.

The 1999 edition included modifications to address the pressure differentials caused by stack effect in elevator hoistways.

The 2003 edition incorporated editorial and formatting updates to comply with the *Manual of Style for NFPA Technical Committee Documents*, as well as formatting requirements for converting from a recommended practice to a standard. The 2003 edition also included significant modifications to Chapter 4 on installation and testing requirements and to Chapter 5 on maintenance requirements. Annex A contained a considerable amount of new and updated information.

The 2007 edition expanded the scope of the document to include smoke dampers. The title of the document was revised, and new chapters on the installation, inspection, testing, and maintenance of smoke dampers were provided. Other technical changes addressed the retention of maintenance records for smoke door assemblies.

The 2010 edition included modifications to smoke damper inspection and testing requirements. The title of the document was also revised.

The 2013 edition added references to NFPA 80, *Standard for Fire Doors and Other Opening Protectives*, for the inspection and testing requirements of smoke door assemblies. Other technical changes addressed the inspection and testing of smoke dampers and labeling of smoke damper access panels.

The 2016 edition of NFPA 105 represented a significant expansion and update of the document. For consistency with NFPA 80 and to allow for a more user-friendly document, a new chapter, Chapter 6, Swinging Doors, containing provisions specific to the installation of side-hinged and pivoted swinging smoke door assemblies was added. Provisions for smoke dampers were moved to a new Chapter 7, Installation, Testing, and Maintenance of Smoke Dampers. Additional chapters will be added in future editions of NFPA 105 to address requirements for other specific types of smoke doors and opening protectives. Also for consistency with NFPA 80, the inspection, testing, and maintenance provisions for smoke door assemblies in Chapter 5 were expanded to address multiple types of smoke doors as well as three types of testing — operational, acceptance, and periodic. A new chapter, Chapter 8, Smoke Protective Curtain Assemblies, addressed the installation, inspection,