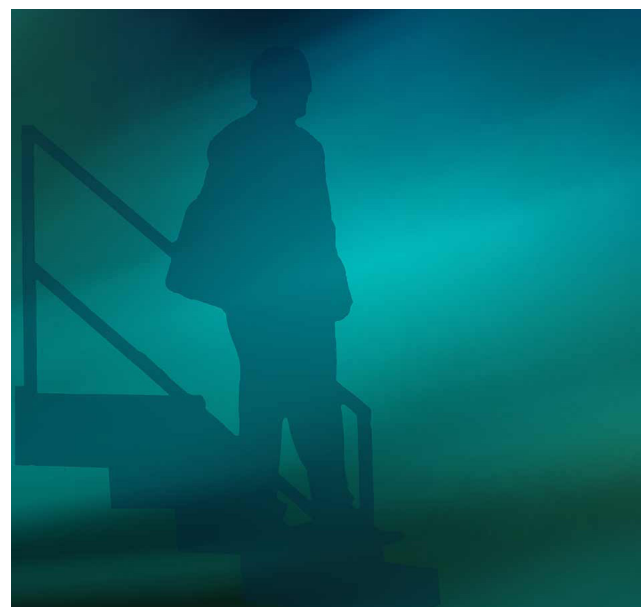




# **Fire and Smoke Dampers: Best Practice Design Tips**

**An AMCA International White Paper**



AMCA International  
30 West University Dr.  
Arlington Heights, IL 60004 USA

**AVA** **Documents**  
June 2015  
Document Sharing Hub

This white paper is available to download at no cost at [www.amca.org/whitepapers](http://www.amca.org/whitepapers)

**MICHAEL J. BULZOMI**, NAILOR INDUSTRIES INC.  
**MARTY GISSEL**, GREENHECK FAN CORPORATION  
**DANE CAREY**, T.A. MORRISON & CO.  
**JOE DAHLHEIMER**, HPAC ENGINEERING  
**LARRY FELKER**, BELIMO

SEND COMMENTS AND SUGGESTIONS TO MICHAEL IVANOVICH,  
DIRECTOR OF INDUSTRY RELATIONS, AMCA INTERNATIONAL,  
[MIVANOVICH@AMCA.ORG](mailto:MIVANOVICH@AMCA.ORG)

# Fire and Smoke Dampers: Best Practice Design Tips

How to minimize risk and cost

## ABSTRACT

**Fire and smoke dampers reduce fire severity and spread, enable fire suppression systems to operate more effectively, and limit property damage. But most importantly, they save lives. This white paper illustrates why fire and smoke dampers are a vital part of a total fire protection plan, and it includes practical design tips to help engineers reduce risk and minimize cost.**

## FIRE AND SMOKE DAMPERS: CONSIDER THEM ESSENTIAL

Fire and smoke dampers are essential components of a complete fire protection plan and can be used in penetrations of fire resistive construction above code required minimums, such as in fully sprinklered buildings where ducts are used for HVAC systems and where fire barrier walls have a required fire resistance rating of one hour or less. This best practice approach strengthens compartmentation and enhances building resiliency during a fire event.

## ENSURE COMPARTMENTATION WITH FIRE AND SMOKE DAMPERS

A total fire protection plan — which includes compartmentation, detection and alarm systems, suppression systems and egress — integrates active and passive life safety strategies. Compartmentation divides a building into cells using fire-resistive construction, and it significantly reduces fire damage and smoke migration. In buildings that have air movement systems, fire and smoke dampers maintain compartment integrity. Decades of UL certification testing and use demonstrate this effectiveness.



A fire/smoke damper undergoing UL hose stream testing.  
*Image courtesy of Nailor Industries*