

Simulated Building Smoke Control Model

The Simulated Building Smoke Control Model is a one-of-a-kind fire safety simulation model. It allows professionals to view and learn about the challenging characteristics of smoke movement within in a building. The Smoke Model is designed for teaching fire service personnel, building officials, design professionals, and others who ensure the fire safety of the American public in all kinds of building structures. The Smoke Model has been installed as part of the Fire Protection Systems Laboratory at the National Emergency Training Center. It became operational in February 1997.

The Model is constructed of Plexiglas to a 1/8 scale. It simulates a three storey building having an east and west wing with an atrium in between. The first floor in each wing simulates an open retail area, and the second floor in each wing is divided into two office areas. The third floor simulates two residential apartments in each wing. There are corridors on both the second and third floors. There are three stairways, an elevator shaft and two mechanical shafts. The model is operated electrically from the custom designed instructor's control panel This panel permits the instructor to establish various conditions within the air handling system that affect the proper operation of the smoke control system. The model simulates the movement of smoke throughout the building in a reasonable, factual manner. The model can demonstrate numerous combinations of the elements comprising the smoke control systems.

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