



FIRE SMOKE DAMPERS

- *Smoke and Combination Fire Smoke Models*
- *Corridor Ceiling Fire Smoke Models*
- *Galvanized and Stainless Steel Construction*
- *Leakage Class I, II & III*
- *1½ and 3 hour Fire Resistance Ratings*



FIRE SMOKE DAMPERS

Greenheck's Fire Smoke Damper products continue the traditions of quality and engineering excellence that have been our hallmark for over 50 years. These traditions have produced Greenheck's comprehensive line of Fans, Ventilators, and Fire Safety Related Damper products recognized throughout the industry for innovation and quality.

With Fire Smoke Dampers rated for all applications, we have the **most user friendly** product offering available from any source. The industry's largest UL listed damper assembly size, with the fewest installation restrictions, and no airflow directional restrictions make Greenheck's Fire Smoke Dampers the easiest to select and install. Our innovative and UL listed *out of the wall* installation provides easy **through the grille** access to actuators, solving many application and installation problems.

This catalog presents an overview of our entire offering. Individual model specifications, performance data, and installation instructions are available. Please contact your Greenheck Damper Louver representative or Greenheck for this additional information regarding application, selection, or purchase assistance.

SMOKE AND COMBINATION FIRE SMOKE DAMPER MODEL NUMBER CODE

The smoke and combination fire smoke damper model number consists of three individual components that make up a specific damper's construction.

The model Number breakdown and corresponding explanation of each component help ensure the correct smoke or combination fire smoke damper for your application.

FSD-23

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1-Product Type

SMD (Smoke Damper) UL 555S listed damper designed to maintain the integrity of a smoke partition that has been penetrated.

SSSMD (Stainless Steel Smoke Damper) UL 555S listed smoke damper constructed of 304 stainless steel.

SMDR (Round Smoke Damper) UL 555S listed damper designed to maintain the integrity of a smoke partition that has been penetrated.

FSD (Combination Fire Smoke Damper)
CFSD (Corridor Ceiling Fire Smoke Damper) UL 555 and UL 555S listed dampers maintain the integrity of a fire rated smoke partition. Also available with additional UL listing required when applied in corridor ceiling applications.

SSFSD (Stainless Steel Combination Fire Smoke Damper) UL 555 and UL 555S listed combination fire smoke damper constructed of 304 stainless steel.

QESD (Through the Grille Access to Actuator) UL listed *out of the wall* damper installation. Removal of the wall grille allows access to actuator and other components.

2 - Blade Type

2 (Triple Vee Construction) Fabricated blade reinforced with 3 longitudinal structurally designed vee's.

3 (Airfoil Construction) Double skin airfoil shape with full length structural reinforcement. Insures the lowest resistance to airflow in HVAC systems with velocities to 4000 fpm and pressures to 8 in. w.g.

4 (Airfoil Construction) Airfoil shape constructed of heavy gauge extruded aluminum. Structural reinforcement through the entire length, insures the lowest resistance to airflow in HVAC systems with velocities to 4000 fpm and pressures to 8 in. w.g.

5 (Round Construction) True round damper construction.

3 - Leakage

(SMD) Leakage
(FSD) Leakage and Fire Resistance Rating

1 Leakage Class III 1 1/2 hours
2 Leakage Class II 1 1/2 hours
3 Leakage Class I 1 1/2 hours
8 Leakage Class I 3 hours

Walls, floors and partitions with a fire resistance rating less than 3 hours require dampers with a 1 1/2 hour fire rating. Wall, floors and partitions with a fire resistance rating of 3 hours or more require dampers with a 3 hour fire rating.

Leakage Class III has leakage less than 40 cfm /ft.² of damper area.

Leakage Class II has leakage less than 10 cfm /ft.² of damper area.

Leakage Class I has leakage less than 4 cfm /ft.² of damper area.

(Above leakage rates are at 1" w.g. ΔP. All models also rated at 4" w.g. ΔP and 8" w.g. ΔP.)

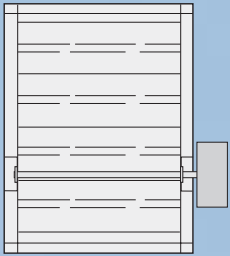


Actuators

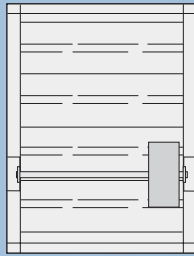
A variety of electric and pneumatic actuators are available for all damper models. Each actuator-damper combination is UL listed to operate up to specific maximum velocities and pressures (ratings as high as 4000 fpm and 8" w.g. available). Actuators can be mounted internally or externally.

Installation Flexibility - As long as damper blades remain horizontal, the damper has no top or bottom and is UL listed for airflow in either direction. Damper can be flipped upside down or versed as needed to provide actuator clearance and accessibility.

Internal or External

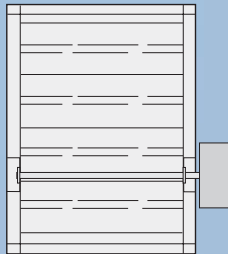
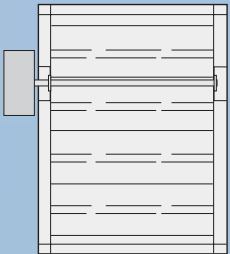


External Mounted
(Standard)



Internal Mounted

Damper Orientation



Dampers may be flipped upside down or reversed to facilitate installation.

Sleeves

Greenheck smoke and combination fire smoke dampers are available with factory mounted sleeves in gauges from 20 to 10 and in lengths required to meet your application.

Open Closed Indication - The **OCI Option** provides one switch that operates when damper is open, and a separate switch that operates when damper is closed for positive indication of damper position.

Resetable Link - The **RRL Option** replaces the fusible link with a bimetal heat responsive device which is easily reset from outside the duct. This allows routine testing of a damper without the need to replace a fusible link. It also ensures controlled closure of the damper eliminating the possibility of duct damage resulting from sudden dynamic type closures.

Two Temperature Control - The **TOR Option** provides damper closure (usually at 165°F) with the ability to override this closure (reopen damper) so duct system can accomplish its intended SMOke Control System functions as long as temperature at damper does not exceed the secondary heat responsive device setting (usually 350°F).

Industry's Largest Damper Sizes - Greenheck offers the largest UL listed damper section and assembly sizes available from any manufacturer. Duct penetrations and wall openings as large as 128" wide x 100" high can be protected without added mullions. (Just another **user friendly feature** that makes Greenheck Fire Smoke Dampers your best choice.)





Other Fire Smoke Damper Literature

Greenheck offers a complete range of fire smoke damper literature starting with the proper selection of the correct damper for your application through the suggested installation.

Application Manual

Fire Smoke Damper Application Manual guides the user through the required steps of proper selection and application of combination fire smoke and smoke dampers. The easy to use format also makes the application manual an excellent quick reference tool for commonly asked questions such as ratings, actuators, codes, standards, oversized openings to name a few.

Technical Data

Comprehensive product specification sheets are available for each Greenheck Fire Smoke Damper model. Each includes detailed information on construction features, available options, pressure drop, damper and sleeve mounting, actuator and accessory space envelopes, and a suggested specification.

Installation Instructions

Easy to read and follow step by step instructions guide the installer through the proper installation procedures for combination fire smoke dampers, smoke dampers as well as mullions for oversized openings and actuators.

Fire Smoke Damper Manufacturing At Three Locations

Greenheck's damper and louver manufacturing is headquartered in Schofield (Central), Wisconsin and we have Eastern and Western regional manufacturing locations to serve all parts of the USA and Canada. Our Eastern facility is in Frankfort, Kentucky and our Western facility in Sacramento, California. All three of these manufacturing locations are equipped to produce Fire Smoke Dampers to exacting standards. Transit time delays (common when all shipments must come from a single location) are eliminated by utilizing the factory location closest to the destination whenever possible.

Comprehensive Rush programs available when you need Fire Smoke Dampers in a hurry.

Warranty

Greenheck warrants this equipment free from defects in material and workmanship for a period of one year from the purchase date. Any units or parts which prove defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid.

Greenheck will not be responsible for any installation or removal costs.