

INSTALLATION INSTRUCTIONS

MODELS: A1, A2, AA1, AA2

SMOKE DAMPERS AND OPERATORS

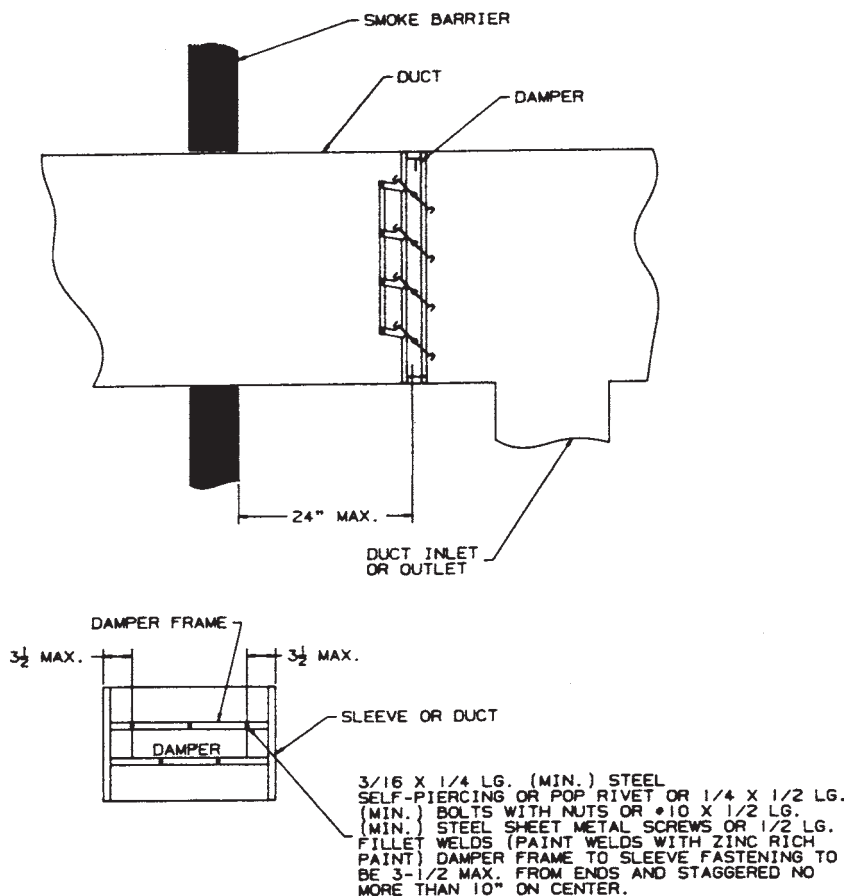
1.0 GENERAL INFORMATION

- 1.1 See table on page 2 for specific damper specifications.
- 1.2 These dampers are supplied with factory mounted actuators and are intended to close automatically upon loss of electrical power or release of air pressure.
- 1.3 The standard factory supplied sleeve is 20 GA galvanized steel (18GA on dampers wider than 84")

2.0 DAMPER INSTALLATION

- 2.1 Dampers shall be installed not more than 24 inches from a smoke barrier and before the first duct inlet or outlet. Installation shall be in accordance with NFPA-90A. These dampers can be positioned so that they are within the rated masonry, block, or gypsum wallboard smoke barrier (See detail on page 2).

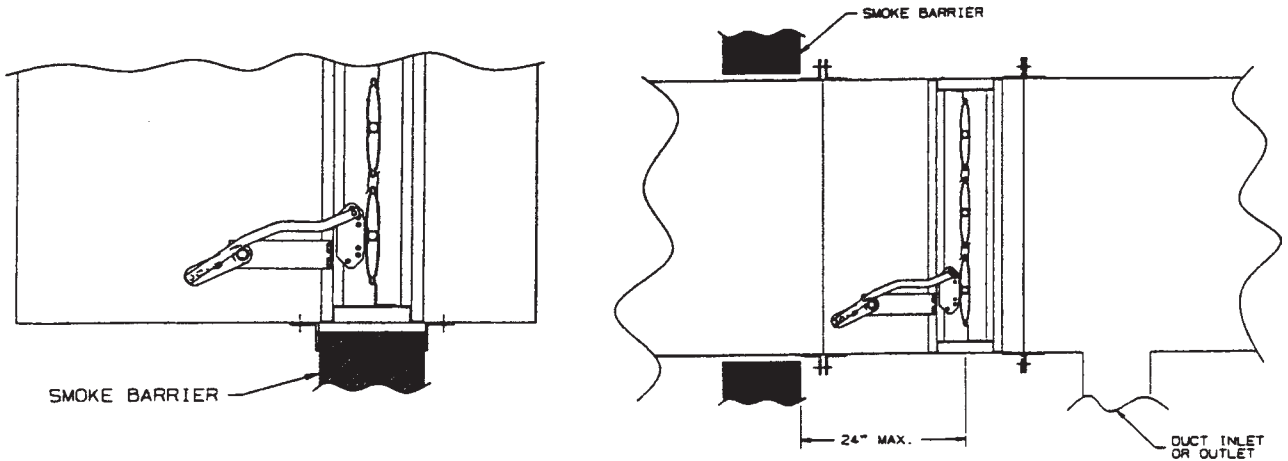
- 2.2 Dampers can be vertically or horizontally mounted with horizontal blades. Flow may be from either direction.
- 2.3 The damper frame must be installed square with all sections in one plane. For dampers supplied without sleeves, use metal shims, if required, between the damper frame and duct/sleeve to prevent distortion. Damper is to be anchored at both frame flanges. Check the damper for free operation. Excessive drag or binding could cause damage to the damper and/or actuator.



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TYPICAL WALL INSTALLATIONS

(FLOOR INSTALLATIONS SIMILAR)



In-Wall Installation

Out of Wall Installation

MULTIPLE PANEL SIZE LIMITATIONS

MODEL A - VERTICAL OR HORIZONTAL MOUNT

ACTUATOR TYPE	MAXIMUM SINGLE PANEL (W x H)	MAXIMUM MULTIPLE PANEL (W x H)	MAX. PANEL WIDE & QUANTITY OF ACTUATORS
GGD121,221,321 331-2792	36 x 48	108 x 48	3

MODEL AA - VERTICAL OR HORIZONTAL MOUNT

ACTUATOR TYPE	MAXIMUM SINGLE PANEL (W x H)	MAXIMUM MULTIPLE PANEL (W x H)	MAX. PANEL WIDE & QUANTITY OF ACTUATORS
MS4209, 4309 MS8209, 8309	36 x 24	108 x 24	3
MS4120, 8120 331-2792	36 x 48	108 x 48	3

MODEL AxxxC - VERTICAL OR HORIZONTAL MOUNT

ACTUATOR TYPE	MAXIMUM SINGLE PANEL (W x H)	MAXIMUM MULTIPLE PANEL (W x H)	MAX. PANEL WIDE & QUANTITY OF ACTUATORS
MS4209, 4309 MS8209, 8309 FSNF120, 24	36 x 36 OR 48 x 24	108 x 36 OR 96 x 24	3 2
MS4120, 8120	36 x 48 OR 48 x 36	108 x 48 OR 96 x 36	3 2
GGD121,221,321 331-2792	36 x 48	108 x 48	3
331-2961, 2995	36 x 36	108 x 36	3

SEALANT

Sealants are used to prevent leakage through cracks that are formed where two parts meet. The amount of sealant required is therefore dependent on the leakage class rating required.

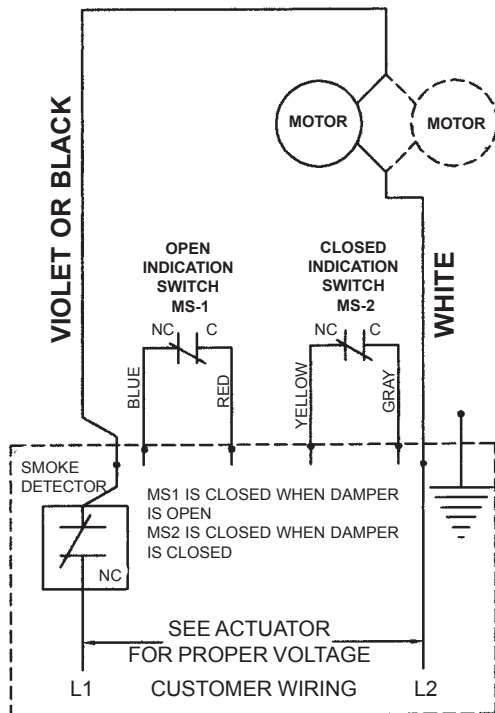
1. Field applied sealant around damper perimeter on both upstream and downstream side to cover gap between frame and sleeve - Class I rated dampers.
2. Field applied sealant around damper perimeter on upstream or downstream side to cover gap between frame and sleeve - Class II rated dampers.

One of the following UL Classified caulking/sealants must be used:

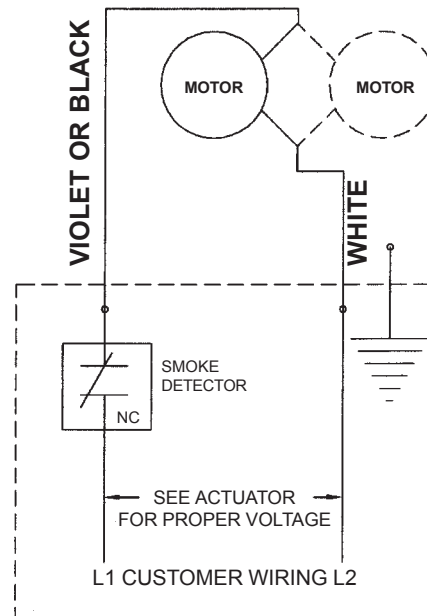
- Hardcast 601
- Dow Corning RTV732
- General Electric IS808
- Novagard RTV300
- 3M Firedam

WIRING SCHEMATICS

1. All wiring installations must comply with the requirements of N.E.C. (NFPA-70), and the National Electric Code.
2. Damper with actuator must be arranged to operate automatically and must be controlled by a smoke detector.
3. Refer to actuator label for appropriate voltage.
4. Connect incoming ground to the actuator assembly.
5. Optional auxiliary blade position indication switches are rated at 11A, 1/3HP, 125VAC. These snap action switches are intended to make or break a circuit and will not provide variable or proportional resistance.



**WIRING SCHEMATIC WHEN INTEGRAL
AUXILIARY SWITCH PACKAGE**



**WIRING SCHEMATIC WHEN NO
INTEGRAL AUXILIARY SWITCH
PACKAGE**

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