



**MODULATING COMBINATION FIRE/SMOKE DAMPER**  
**AIRFOIL BLADE • HIGH PERFORMANCE**  
**3 HR. LABEL • ULTRA-LOW LEAKAGE**  
**MODELS: 1220M-3 AND 1221M-3 (TYPE A)**



**QUALIFICATIONS:**

- UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER 3 hr. Label (File #'s R9492 & R19569).
- UL 555S CLASSIFIED SMOKE DAMPER (File # R9492) Leakage Class I at 250°F elevated temperature.
- City of New York. MEA #366-03-M.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:106.
- Meets NFPA 80, 90A, 92A, 92B, 101 and 105 as well as IBC and NBC (Canada) Building Code requirements.
- Maximum velocity: 2000 fpm @ 4" w.g.

The 1220M-3 Series modulating dampers are classified for use as a volume control damper in applications where building codes require both a fire damper for the protection of ductwork penetrations in walls or floors that have a fire resistance rating of up to 4 hours and a leakage rated damper for operational smoke control in static or dynamic smoke management systems.

The 1220M-3 Series has been especially designed and tested to provide premium performance. It offers the lowest leakage class available and is qualified for installation with airflow in either direction and inverted mounting. Airfoil blade design and elimination of blade sills, top and bottom, provide a low pressure drop design.

Unique, inter-locking double skin blade design provides flame and smoke seal under fire conditions.

**STANDARD SPECIFICATION:**

- Frame:** 5" x 7/8" x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel.  
**Blades:** 14 ga. (2.0) equivalent galvanized steel formed airfoil on 5 1/2" (140) centers. Opposed action.  
**Linkage:** Concealed in frame. 12 ga. (2.7) plated steel.  
**Bearings:** 1/2" (13) dia. self-lubricating oilite bronze.  
**Axles:** 1/2" (13) dia. plated steel double bolted to blades.  
**Jackshaft:** 1/2" (13) dia. cadmium plated steel.  
**Jamb Seals:** Stainless steel.

**Heat Responsive Device (Controlled Closure):**

ERL (Electric Resettable Link) is standard on dampers with electric actuators: 250°F (121°C) standard. 165°F (74°C) and 212°F (100°C) available.

PRL (Pneumatic Replaceable Link) is standard on dampers with pneumatic actuators: 212°F (100°C) standard. 165°F (74°C) available.

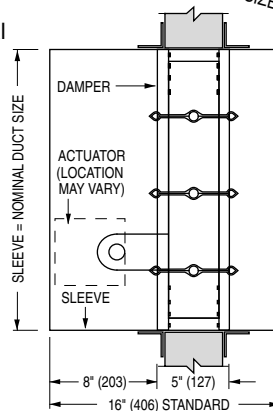
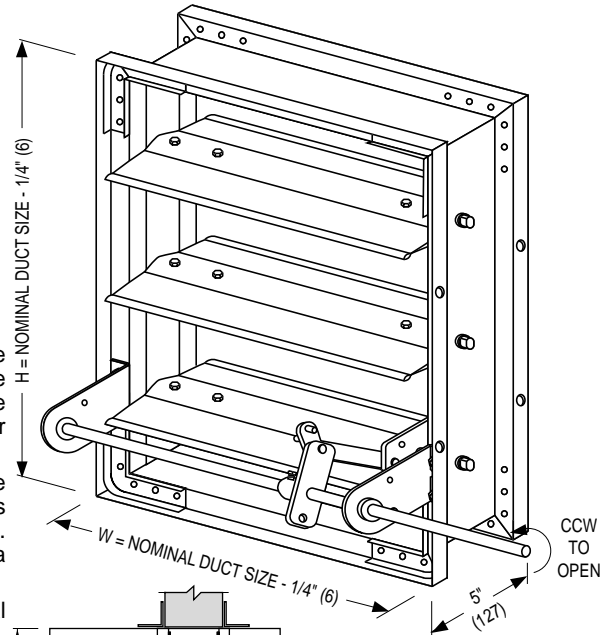
**Sizes (Damper W x H):**

Velocity/ Pressure Rating	Elevated Temp. °F	Minimum		Maximum		
		Single Section		Single Section		Multiple Section
		Vertical/Horizontal	Vertical	Vertical	Horizontal	
24	250	8" x 8" (203 x 203)	36" x 48" (914 x 1219)	32" x 48" (813 x 1219)	120" x 96" (3048 x 2438) (maximum each section is 30" x 48" [762 x 1219])	

**Note:** Dampers with duct heights less than 8" (203) require a Type 'B' sleeve enclosure (Model 1222M-3). Duct sizes less than 8" (203) in width require a Type 'C' enclosure (Model 1223M-3).

**BASE MODEL SELECTION:**

- 1220M-3** With side actuator mounting plate
- 1221M-3** Standard factory sleeve (caulked to UL requirements) 16" long x 20 ga. (406 x 1.0).
- 1221M-3** Non-standard sleeve. Specify \_\_\_\_\_ length \_\_\_\_\_ ga. Available up to 36" (914) dependent upon wall thickness and 10 through 20 ga. (3.5 through 1.0).



Wall Thickness	Minimum Sleeve Length
4 (102)	16 (406)
8 (203)	20 (508)
12 (305)	24 (610)
16 (406)	28 (711)

**LEAKAGE CLASS/ELEVATED TEMPERATURE: I @ 250°F**

**DYNAMIC VELOCITY/PRESSURE RATING:**

**24** 2000 fpm @ 4" w.g.

**ACTUATOR SELECTION:**

- Electric
- Pneumatic

**ACTUATOR LOCATION:**

- External
- Internal (in the airstream)

**ACTUATOR FAIL POSITION: Closed.**

**OPTIONS:**

- BS** Stainless steel bearings
- MLS-300** Position indicator switch pack
- MLS-400** Electric Fire Sensor (Re-openable control system). Includes dual heat sensors (165°F and 250°F) and position indicator switch pack.
- QS1** Quick-set retaining angle (one side)
- QS2** Quick-set retaining angles (two sides)
- TDF1** Flange (one end) } (20 or 22 ga.
- TDF2** Flange (both ends) } sleeves only)

For installation instructions, see IOM-1220INST.  
 Dimensions are in inches (mm).

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 7 - 12	1200	8 - 21 - 08	1220M-3-1