



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



QUALIFICATIONS:

- UL 555 & CAN/ULC-S112 CLASSIFIED DYNAMIC FIRE DAMPER 3 hr. Label (File # R9492).
- UL 555S & CAN/ULC-S112.1 CLASSIFIED SMOKE DAMPER Leakage Class I or II at 250°F or 350°F elevated temperature (File # R9492).
- City of New York. MEA # 366-03-M.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:0106.
- Meets NFPA 80, 90A, 92A, 92B, 101 and 105 as well as IBC and NBC (Canada) Building Code requirements.
- Maximum velocity: Up to 4000 fpm @ 8" w.g. (20 m/s @ 2 kPa).

The 1220-3 Series dampers are ideal for 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 also require a leakage rated damper for operational smoke control in static or dynamic smoke management systems.

The 1220-3 Series has been especially designed and tested to provide premium performance and is AMCA licensed. 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 CONSTRUCTION:

- 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):

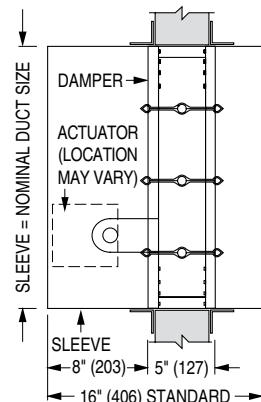
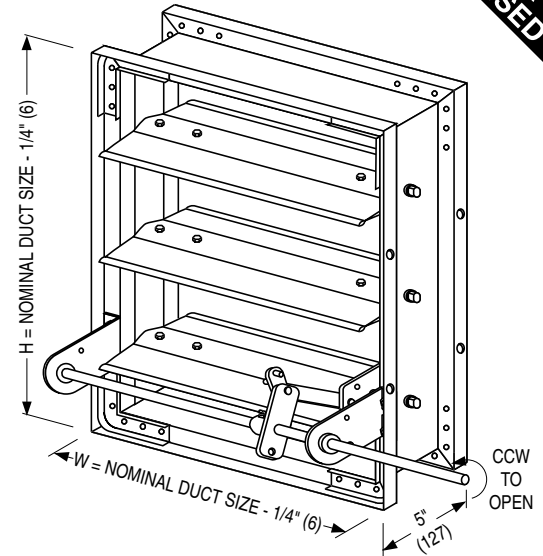
ERL (Electric Resettable Link) is standard on dampers with electric actuators: 250°F (121°C) standard. 165°F (74°C), 212°F (100°C) and 350°F (176°C) available.

PRL (Pneumatic Replaceable Link) is standard on dampers with pneumatic actuators: 212°F (100°C) standard. 165°F (74°C) and 280°F (138°C) available.

Sizes (Duct W x H):

Velocity/ Pressure Rating	Elevated Temp. °F	Minimum		Maximum		
		Single Section		Single Section		Vertical
		Vertical/Horizontal	Vertical	Horizontal	Vertical	
24, 34, 36, 46	250/350	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]).	
48	250		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]).	
48	350		36" x 24" (914 x 610)	32" x 24" (813 x 610)	120" x 48" (3048 x 1219) (maximum each section is 30" x 24" [762 x 610]).	

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



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

BASE MODEL SELECTION:

- 1220-3** With side actuator mounting plate
- 1221-3** Standard factory sleeve (caulked to UL requirements) 16" long x 20 ga. (406 x 1.0) (18 ga. (1.3) for dampers over 84" (2134) in width).
- 1221-3** 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).

For installation instructions, see IOM-1220INST.

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	10 - 14 - 24	1200	7 - 26 - 21	1220-3-1



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MOUNTING:

- V Vertical
- H Horizontal

ACTUATOR SELECTION:

- Electric Pneumatic

POWER REQUIREMENT:

- 120 120 VAC
- 230 230 VAC
- 24 24 VAC
- 25 25 psi Pneumatic

LEAKAGE RATING:

- I Class I (Standard)
- II Class II

DYNAMIC VELOCITY/PRESSURE RATING:

- 24 2000 fpm @ 4" w.g. (Standard)
- 34 3000 fpm @ 4" w.g. (Optional)
- 36 3000 fpm @ 6" w.g. (Optional)
- 46 4000 fpm @ 6" w.g. (Optional)
- 48 4000 fpm @ 8" w.g. (Optional)

ELEVATED TEMPERATURE:

- 250 250°F (121°C) (Standard)
- 350 350°F (176°C)

CLOSURE DEVICE:

- ERL Electric Resettable Link
- PRL Pneumatic Link
- DTO Dual Temp. Override Sensor
- FL Fusible Link

CLOSURE TEMPERATURE:

- 250°F (121°C) (std.)
- 165°F (74°C)
- 212°F (100°C) (std.)
- 280°F (138°C)
- 250°F / 165°F (121°C / 74°C) (std.)
- 350°F / 165°F (176°C / 74°C)
- 165°F (74°C) (std.)
- 212°F (100°C)
- 350°F (176°C)

FL Fusible Link is only available with electric actuator (external mount, fail open) @ 250°F (121°C), 2000 fpm @ 4" w.g. (36" x 36" [914 x 914] Vertical, 32" x 36" [813 x 914] Horizontal max.).

ACTUATOR MOUNTING:

- EXT External (Standard)
- INT Internal (Optional)

ACTUATOR FAIL POSITION:

- CL Closed (Standard)
- OP Open (Optional) (Requires FL Fusible Link)

OPTIONS:

- BS Stainless steel bearings
- MLS-300 Position Indicator Switch Pack
- QS1 Quick-set retaining angle (one side)
- QS2 Quick-set retaining angles (two sides)
- TDF1 Flange (one end) } 22 or 20 ga.
- TDF2 Flange (both ends) } sleeves only

For installation instructions, see IOM-1220INST.

SCHEDULE TYPE:		Page 2 of 2			
PROJECT:		Dimensions are in inches (mm)			
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	10 - 14 - 24	1200	7 - 26 - 21	1220-3-1	