

MODEL UA2

MODEL UA2 250 • MODEL UA2 350

LEAKAGE AND TEMPERATURE RATED COMBINATION FIRE/SMOKE DAMPER

LEAKAGE CLASS 2 • DYNAMICALLY CLASSIFIED
TEMPERATURE CLASS 250°F or 350°F

STANDARD MATERIALS AND CONSTRUCTION

- FRAME:** 5 1/2" x 7/8" x 16-GA galvanized steel hat channel.
- BLADES:** 20-GA Double skinned Galvanized Steel. (Equal to 14-GA), parallel action
- AXLES:** Square plated steel.
- BEARINGS:** Oil Impregnated Bronze.
- LINKAGE:** Concealed In-Jamb, Plated Steel Tie Bar, Stainless Steel Pivots
- STOPS:** 18-GA galvanized steel at head and sill
- SLEEVE:** Minimum 20-GA galvanized steel by 20" long is standard for sizes up to 84" wide; and 18-GA is standard for sizes over 84" wide.
- CAULKING:** UL approved.
- FINISH:** Mill on galvanized steel.
- ACTUATOR:** ELECTRIC, with 165° thermal disc; or PNEUMATIC, with 165°F fusible link and P.E.R.V. Factory-installed for Power-Open/Spring-Return (fail close) operation. See Reverse Side.

UNDERWRITERS LABORATORIES INC.®

Classified

FIRE DAMPERS

FIRE RESISTANCE RATING 1 1/2 Hr.
ALSO CLASSIFIED AS TO LEAKAGE RESISTANCE
CLASS II-250°F
R-4708



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FIRE DAMPERS

FIRE RESISTANCE RATING 1 1/2 Hr.
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CLASS II-350°F
R-4708



Wall Thickness	Recommended Sleeve Length
4", 6"	20"
8"	22"
12"	26"

NOTE: The length of the sleeve should not extend over 6" beyond the wall, except on the actuator side, where the sleeve may extend to a maximum 16" beyond the wall.

California State Fire Marshal
Listing No.: 3225-1328:110
3230-1328:109

DIMENSIONAL DATA

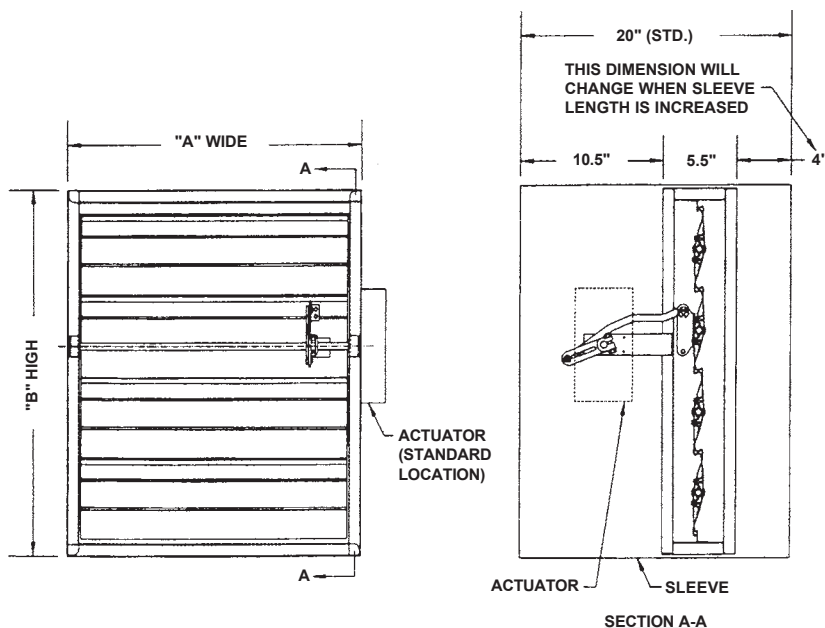
RECTANGULAR DAMPERS

- Minimum Size:** 8"W x 8"H
8"W x 6"H
(with B Pan)
- Maximum Size:**
Single Section: 32"W x 48"H
Multiple Section: 96"W x 48"H

ROUND AND OVAL DAMPERS (Type C Housing)

- Minimum Size:**
Round: 6" Diameter
- Maximum Size:**
Single Panel
Round: 30" Diameter
Oval: 30"W x 47"H
Multiple Panel
Round: 47" Diameter
Oval: 62"W x 46"H
OR
94"W x 24"H

NOTE: Dampers 13" high and less have a single blade.



PROJECT: _____
 LOCATION: _____
 ARCHITECT: _____
 ENGINEER: _____
 CONTRACTOR: _____
 PO NUMBER: _____
 DATE: _____

ARROW UNITED INDUSTRIES SUBMITTAL DATA

ACTUATOR SELECTION

Underwriters Laboratories requires that all UL-555S rated dampers be accompanied with their matching UL-approved factory supplied actuators. The factors for proper actuator selection are actuator type (electric or pneumatic), voltage requirement, temperature rating, and damper size. Arrow United will factory install actuators for all combination fire/smoke dampers.

ELECTRIC

	Honeywell ML4115 (120 VAC) ML8115 (24 VAC)	Honeywell MS 4209 (120 VAC) MS 8209 (24 VAC)	Honeywell MS 4120 (120 VAC) MS 8120 (24 VAC)
Max Panel Size at 250°	24" x 16"	32" x 24" (Sizes up to 24" x 24" rated up to 3000 fpm, 4 in. wg.)	32" x 48"
Max Panel Size at 350°	Contact Factory	24" x 24"	32" x 48"

Min. size for Internal mount: 12" x 12" 12" x 12" 12" x 20"

PNEUMATIC

	Siemens 331-2997	Siemens 331-2996
Max Panel Size at 250°	24" x 24" (@20 PSI)	32" x 48" (@20PSI)
Max Panel Size at 350°	24" x 24" (@25 PSI)	32" x 48" (@20PSI) (Not available with Sens-O-Therm)

Min. size for Internal Mount: 12" x 20" 16" x 24"

AMP DRAW

ML 4115—run .18 hold .11
ML 8115—run .70 hold .35
MS 4209—run .25 hold .13
MS 8209—run 1.0 hold .13
MS 4120—run .35 hold .15
MS 8120—run 1.8 hold .42

AVAILABLE OPTIONS: (Must Be Specified)

- Normally, actuators are externally mounted on the left side of the sleeve, as viewed from the jackshaft side of the damper. Actuators may be mounted on the right side at no additional charge, if specified on the order, except where two actuators are used on multiple panel assemblies. Pneumatic actuators can be mounted internally on sizes 15" high and greater. Electric actuators can be mounted internally on sizes 8" high and greater.
- Sleeve thicknesses heavier than 20 gauge are available.
- Sleeve lengths longer than the standard 20" are available.
- 212°F thermal disc (electric models); PERV with 212°F fusible link (pneumatic models).
- "Sens-O-Therm" Thermally Reopenable Temperature Sensing System is available with 165°F (Standard) or 212°F low temperature settings. This system includes terminal screw contacts for connection to open and closed position indicator switches. It also includes a second thermal disc to re-close the damper when the rated degradation temperature is reached.
- Dual position indication package.
- Smoke detector (damper height must be 10" minimum).

GENERAL NOTES

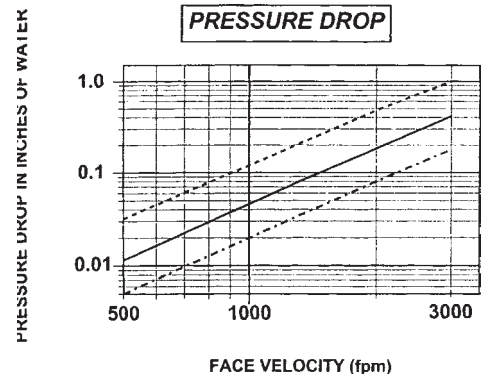
- Underwriters Laboratories Inc. classified leakage damper for use in smoke control systems designed for Leakage Class I and Temperature Class 250°F or 350°F, in accordance with UL Standard 555S.
- Underwriters Laboratories Inc. classified for use for fire resistance ratings of less than 3 hours, in accordance with UL Standard 555.
- Refer to UL-approved Installation Instructions for detailed operational information.

PERFORMANCE

LEAKAGE

Definition: UL 555S **Class II:**
 Leakage Not Greater Than:
 10 CFM per sq. ft. @ 1 in. wg
 20 CFM per sq. ft. @ 4 in. wg

FACE VELOCITY IN FEET PER MINUTE
 TYPICAL PERFORMANCE CURVE
 TESTED PER AMCA STANDARD 500-D; FIGURE 5.3:
 (IN-DUCT MOUNT)
 SMALLER SIZES WILL HAVE HIGHER PRESSURE DROPS



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