

# MODEL 291

2 Blade • Insulated • For Use in Static Systems • Rectangular Ceiling Radiation Damper

## STANDARD MATERIALS AND CONSTRUCTION

- FRAME:** 22-GA galvanized steel; one piece; 2 21/32" standard depth
- BLADES:** 22-GA galvanized steel
- INSULATION:** 1/2" thick gypsum
- FUSIBLE LINK:** 165°F
- SPRING:** Extension type
- FINISH:** Mill

## OPTIONS

- 212°F Fusible Link
- Thermal Blanket
- Top Extension (see chart)
- Bottom Extension (see chart)
- Top and Bottom Extension (see chart)

## NOTES

1. The larger dimension is always the width, and is parallel to the blades.
2. Dampers are provided exact size in 1" increments.  
Deduct 1/4":
  - A. For installation where damper is to be installed inside a steel duct.
  - B. For lay-in installation where damper is to be installed directly into the tee bar grid of the ceiling.
 Do not deduct 1/4":  
For surface mount ductless installation where damper is to be installed over the neck of a grille or lay-in diffuser.
3. This ceiling damper is used to provide the required fire and heat radiation protection of HVAC penetrations of Floor Ceiling and Roof-Ceiling Assemblies having a Restrained or Unrestrained Assembly Fire Resistance Ratings of 2 hour or less, in accordance with UL263. Standard Fire Dampers (1 1/2 hr. and 3 hr.) do not provide the necessary heat radiation protection. Ceiling Dampers are also called Ceiling Fire Dampers, Radiation Dampers, and Radiation Shields. See Air Balance's UL-approved Installation Instructions for various installation requirements and procedures. Approved Ceiling Designs are illustrated by Design Number in UL's Fire Resistance Directory.

**UNDERWRITERS LABORATORIES INC.®**  
CLASSIFIED STATIC CEILING DAMPER  
FIRE RESISTANCE RATING

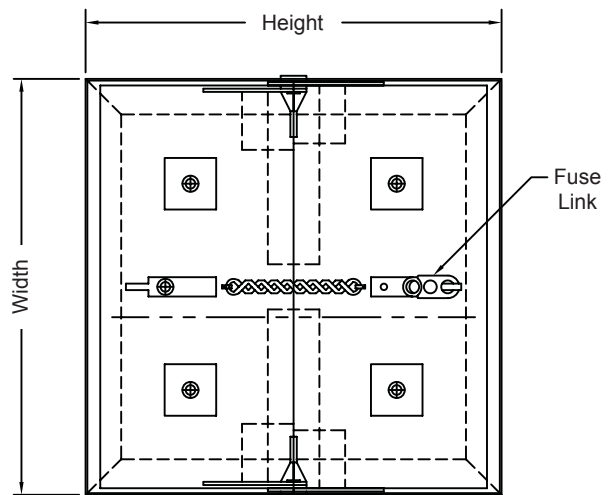
abi air balance

FILE #R11235



This ceiling radiation damper meets the construction and performance requirements of:

- Underwriters Laboratories Inc. Standards 555C
- New York City MEA Listing #110-99-M
- California State Fire marshal Listing #3226-1328:105
- 1 hour Combustible Ceiling Assemblies
- 1 hour and 2 hour Non-Combustible Ceiling Assemblies

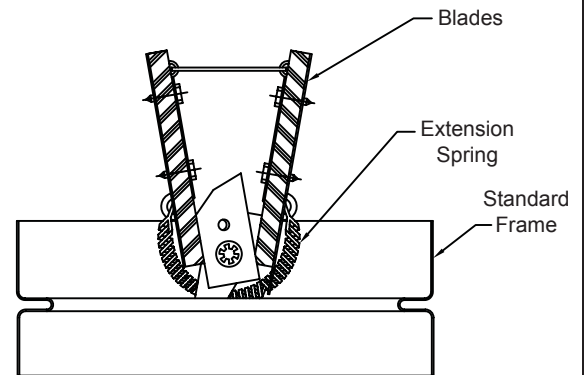


## DAMPER SIZE

Orientation	Horizontal (Ceiling) Mount Only	
Panels	Min Panel	Max Panel
291	11"W x 6"H	324 sq.in. 18"W 18"H

Frame Extension Chart

Depths listed are total frame depths.	Heights: 5 3/4" - 10"	Heights: 10 3/4" - 14"	Heights: 14 3/4" - 18"
Top Extension	9 1/4"	9 1/4"	10 3/4"
Bottom Extension	6 1/8"	6 1/8"	6 1/8"
Top and Bottom Extension	9 1/4"	10 3/4"	12 3/4"



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