

## IL35 INSULATED BLADE DAMPER

### APPLICATION

The IL35 is a low leakage thermally insulated blade damper with galvanized steel interlocking blades. The blade insulation of the IL35 carries an R value of 3.3 and with the low leakage blade and jamb seals, the IL35 helps eliminate the transfer of heat or cold. The IL35 is IECC (International Energy Conservation Code) compliant with a leakage rating of less than 4 cfm/ft<sup>2</sup> @ 1 in. w.g. on section sizes 36" (914) wide and greater.

### STANDARD CONSTRUCTION

#### FRAME

5" x 1" x 16 gage (127 x 25 x 1.6) galvanized steel hat channel with corner braces for structural strength equal to 13 gage (2.28) channel frames. Low profile 3 1/2" x 3/8" x 16 gage (89 x 10 x 1.6) galvanized steel channel top and bottom frame on dampers under 13" (330) high.

#### BLADES

6" (152) wide, 16 (1.6) gage galvanized steel blades spaced approximately 6" (152) center to center. (Parallel action only.)

#### SEALS

Blade edge is PVC coated polyester fabric mechanically locked into blade edge. Jamb is flexible metal, compression type.

#### BLADE INSULATION

Styrofoam blade insulation.

#### BEARINGS

Synthetic.

#### AXLES

1/2" (13) plated steel hex.

#### LINKAGE

Concealed in frame.

#### CONTROL SHAFT

6" (152) x 1/2" (13) diameter. Outboard support bearing supplied with all single section dampers for field mounted actuators. Factory-installed jackshaft supplied with all multiple section dampers.

#### FINISH

Mill.

#### MINIMUM SIZE

Single blade – 5"w x 8"h (127 x 203).  
(Two blades, parallel action – 5"w x 14"h (127 x 356).

#### MAXIMUM SIZE

Single section assembly – 48"w x 72"h (1219 x 1829).  
Multiple section assembly – Unlimited size.

#### TEMPERATURE LIMITS

-25°F (-32°C) minimum and +180°F (+83°C) maximum.

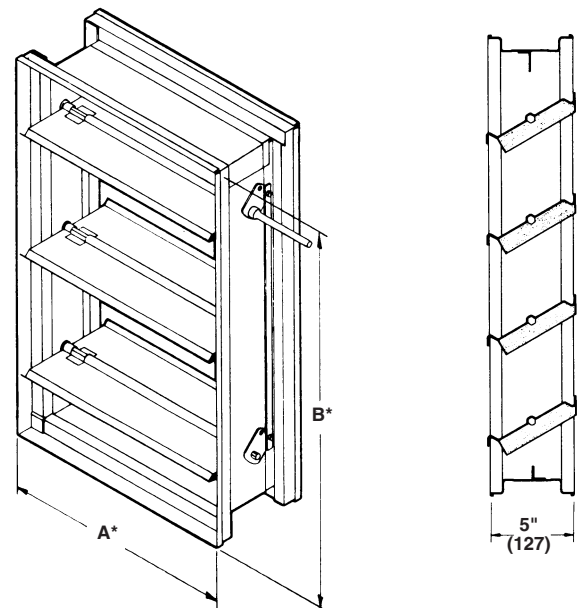
### VARIATIONS

Variations to standard design are available at additional cost include:

- Special materials
- Selection of finishes including baked acrylic enamel and aliphatic polyurethane
- Variety of bird and insect screens
- Flanged frame and extended sill
- SP100 remote damper blade position package.
- Factory-installed manual, pneumatic and electric actuators (specific information required with order).

### FEATURES

- Styrofoam blade insulation provides energy savings.
- "Interlocking design" steel construction with no bolts, screws or rivets to shake loose.
- Shake proof, low maintenance linkage.
- Plated axles positively locked to blade.
- Internally braced frame corners to reduce racking.
- Blade seals mechanically locked into blade edge.



#### NOTES:

1. \*Units furnished approximately 1/4" (6) smaller than given opening dimensions.
2. Dimensions shown in inches, parenthesis ( ) indicate millimeters.

## PERFORMANCE DATA

MAXIMUM CFM				
DAMPER WIDTH INCHES	MAXIMUM SYSTEM PRESSURE	VELOCITY SYSTEM VELOCITY	LEAKAGE*	
			% of Max. Flow	CFM/Sq. Ft.
48" (1219)	4.0" w.g.	1500 FPM	.25	3.7
36" (914)	5.0" w.g.	1500 FPM	.25	3.7
24" (610)	6.0" w.g.	1500 FPM	.32	4.8
12" (305)	8.0" w.g.	1500 FPM	.47	7.0

\* Leakage information based on pressure differential of 1" w.g. tested per AMCA Std. 500. Dimensions in parentheses ( ) indicate millimeters.

## SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans, or in accordance with schedules, insulated blade dampers that meet the following minimum construction standards: Frame shall be 16 gage galvanized steel structural hat channel, with tabbed corners for reinforcement. Blades shall be 16 gage galvanized with Styrofoam insulation completely enclosed with galvanized steel outer skin. The blade insulation shall carry an R value of at least 3.3. Blade edge seals shall be PVC coated polyester fabric suitable for -25°F (-32°C) to +180°F (+83°C) mechanically locked into the blade edge. Adhesive or clip on type seals are unacceptable. Jamb seals shall be flexible metal, compression type to prevent leakage between blade end and damper frame. Blade end overlapping frame is unacceptable. Bearings shall be corrosion resistant, molded synthetic sleeve type turning in an extruded hole in

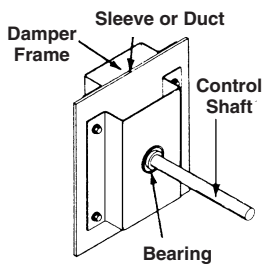
the damper frame. Axles shall be square or hexagonal positively locked into the damper blade. Linkage shall be concealed, out of airstream, within the damper frame to reduce pressure drop and noise. Dampers shall be in all respects equivalent to Ruskin model IL35.

### Specifier Select Option

Dampers shall be equipped with factory installed damper position indication switch package. The switch package shall include two position indication switches linked directly to the damper blade to provide full open and full closed damper blade position. The switch package shall provide the capability to interface with the HVAC control system and provide remote damper blade position status. Switch package shall be equivalent to Ruskin model SP100.

## INSTALLATION

IL35 IS NOT RECOMMENDED FOR INSTALLATION WITH BLADES RUNNING VERTICALLY. For proper installation, damper must be installed square and free from racking. Actuator must be installed on linkage side. See "Induct Mount Control Dampers Installation Instruction" for details.



Outboard Support Bearing Detail

## BRACING OF MULTIPLE SECTION DAMPER ASSEMBLIES

The IL35 is intended to be self supporting only in its largest single section size. Multiple section damper assemblies may require bracing to support the weight of the assembly and to hold against system pressure. Ruskin recommends appropriate bracing to support the damper horizontally at least once for every 8' of damper width. Vertical assemblies and higher system pressures may require more bracing.

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