

## MD35 MANUAL BALANCING DAMPER

### APPLICATION

The MD35 is a ruggedly built damper designed especially for manual balancing applications. It offers an economical manufactured product alternative to the "shop built" items often installed.

### STANDARD CONSTRUCTION

#### FRAME

5" x 1" x 16 gauge (127 x 25 x 1.6) galvanized steel channel with corner braces. Low profile top and bottom 3 1/2" x 3/8" x 16 gauge (89 x 10 x 1.6) galvanized steel channel 13" (330) high and under, actual.

#### BLADES

8" (203) maximum width 16 gauge (1.6) galvanized steel. Opposed blade action is standard with parallel blade action optional at no additional charge.

#### BLADE STOP

20 gauge (.9) galvanized steel standard for units 12" (305) high and under as required by SMACNA duct construction standards. Optional for units over 12" (305) high as stated by SMACNA duct construction standards.

#### FINISH

Mill galvanized.

#### LINKAGE

Concealed in frame.

#### AXLES

1/2" (13) hex.

#### BEARINGS

Molded synthetic.

#### CONTROL SHAFT

3" (76) x 3/8" (10) square plated steel.  
2" (51) stand-off bracket & hand quadrant included

#### MINIMUM SIZE

6"w x 5"h (152 x 127). Dampers under 10 3/8" (264) nominal are single blade.

#### MAXIMUM SIZE

Single section – 48"w x 48"h (1219 x 1219).

#### MAXIMUM MULTI-SECTION ASSEMBLY

96"w x 96"h (2438 x 2438). Uses (1) hand quadrant per damper section

#### TEMPERATURE LIMITS

-40°F (-40°C) minimum and +240°F (+116°C) maximum.

#### ESTIMATED WEIGHT

7 lbs (3.2kg) per square foot.

Dimensions in parenthesis ( ) indicate millimeters.

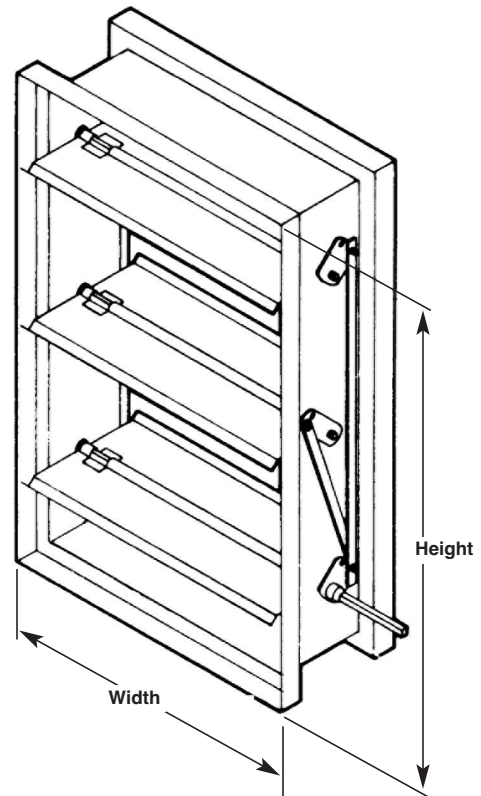
Units furnished approximately 1/4" (6) smaller than given dimensions.

### FEATURES

- Non-stick non-corrosive bearings for long life and ease of operation.
- Positive lock axles and shake proof linkage for low maintenance operation.
- Exceeds volume damper designs recommended by SMACNA.

### OPTIONS

- 1/2" (13) round control shaft.
- Ollite bronze bearings.



## SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, manual balancing dampers that meet or exceed the following minimum construction standards: Frame shall be 16 gauge (1.6) galvanized steel formed into structural hat channel shape with tabbed corners for reinforcement. The blades shall be single skin, 16 gauge (1.6) galvanized steel with three longitudinal

grooves for reinforcement. Bearings shall be corrosion resistant, molded synthetic sleeve type turning in an extruded hole in the damper frame. Axles shall be hexagonal positively locked into the damper blade. Dampers shall in all respects be equivalent to Ruskin Model MD35.

## MD35 PERFORMANCE DATA

Damper Width	Maximum System Pressure	Maximum System Velocity
48" (1219)	2.5" w.g.	1500 fpm
36" (991)	3.0" w.g.	1500 fpm
24" (610)	4.0" w.g.	1500 fpm
12" (305)	5.0" w.g.	1500 fpm

The MD35 is structurally designed for velocities to 2000 fpm and above. Turbulence may produce objectionable noise in some conditions with velocities above 1500 fpm.

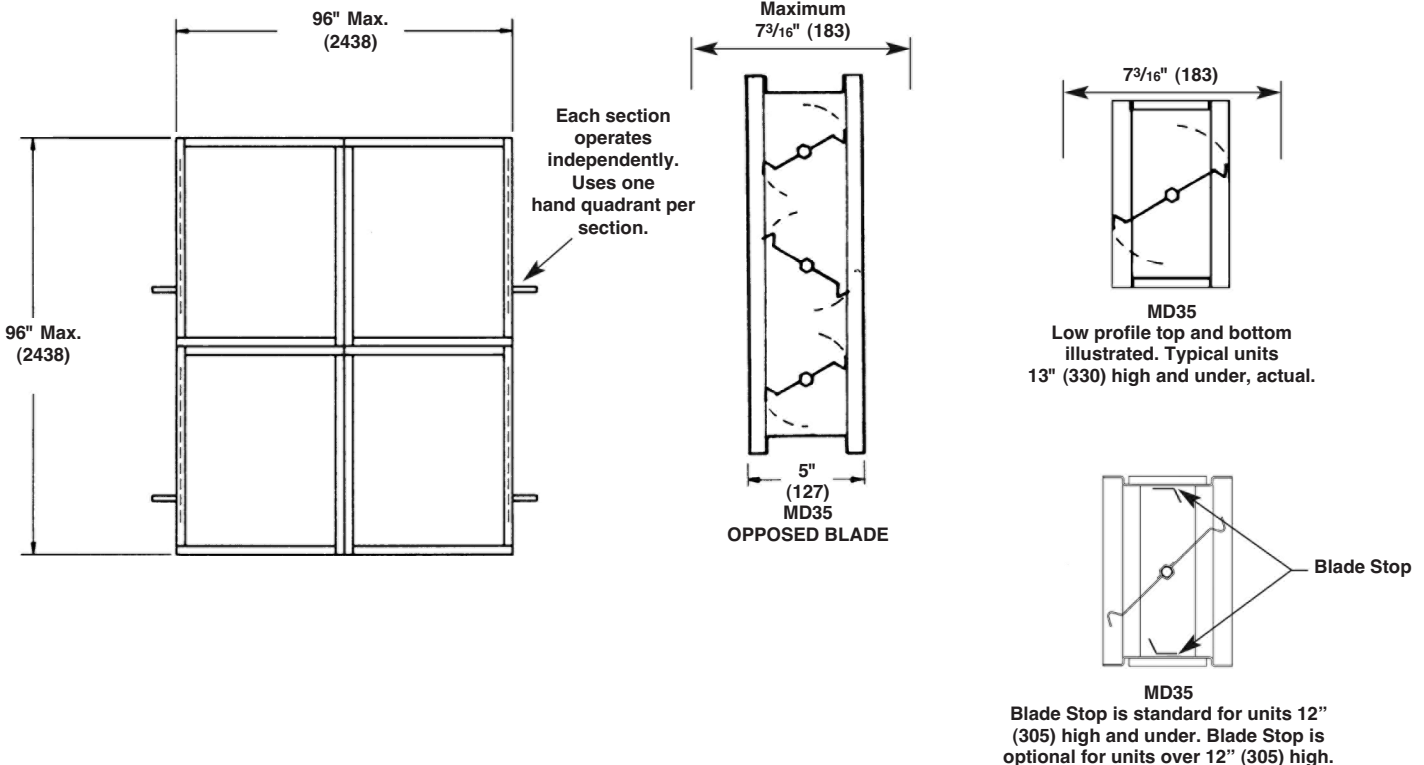
Dampers may tolerate higher pressures and velocities than those listed here. Conservative ratings are presented intentionally in an effort to avoid misapplication. Consult Ruskin or your Ruskin representative when a damper is to be applied in conditions exceeding recommended maximums.

## INSTALLATION AND DIMENSIONAL INFORMATION

### BRACING OF MULTIPLE SECTION DAMPER ASSEMBLIES

The MD35 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.



3900 Dr. Greaves Rd.  
 Kansas City, MO 64030  
 (816) 761-7476  
 FAX (816) 765-8955  
 www.ruskin.com