CD50-CE LOW LEAKAGE CONTROL DAMPER
High Performance Extruded Aluminum Airfoil for Coastal Environments
Class 1A Leakage Rated

APPLICATION
Designed for coastal regions and other corrosive environments, the CD50CE is a low leak, extruded aluminum damper designed with standard corrosion resistant features that facilitate harsh environments. The damper includes airfoil blades for higher velocity and pressure HVAC systems. It meets the leakage requirements of the International Energy Conservation Code by leaking less than 3 cfm/sq. ft. at 1" of static pressure and is AMCA licensed as a Class 1A damper. Damper comes standard with stainless steel linkage and anodized aluminum blades and frame.

STANDARD CONSTRUCTION
FRAME
5" x 1" x 6063T6 high yield extruded aluminum hat channel with .125" minimum wall thickness (127 x 25 x 3.2). Low profile, 5" x 1/2" (127 x 13) top and bottom frames on dampers 12" (305) high and less. Mounting flanges on both sides of frame.

BLADES
6" (152) wide, 6063T6 high yield heavy gage extruded aluminum, airfoil shape.

BLADE SEALS
Ruskiprene™ Extruded

JAMB SEALS
Stainless Steel compression type

BEARINGS
Molded synthetic.

LINKAGE
Stainless Steel (concealed in frame)

AXLES
1/2" (13) stainless steel hex.

MAXIMUM SIZE
Single section – 60"w x 72"h (1524 x 1829).
Multiple section assembly – Unlimited size.

MINIMUM SIZE
Single blade – 6"w x 5"h (152 x 127).
Two blades, parallel or opposed action: 6"w x 9"h (152 x 229).

TEMPERATURE LIMITS
-72°F (-58°C) and +275°F (+135°C).

FEATURES
• Airfoil blade design for low pressure drop and less noise generation.
• Positive lock axles, noncorrosive bearings and shake proof linkage for low maintenance operation.
• Blade edge seals mechanically lock into the blade for superior sealing.
• Anodized finish with stainless linkage for coastal applications.

OPTIONS
• Factory-installed, pneumatic and electric actuators.
• SP100 Switch Package to remotely indicate damper blade position
• Front, rear or double flange frame with or without bolt holes.

1. Values shown in parentheses ( ) are millimeters unless otherwise indicated.
2. Refer to Installation Instructions for additional details.
3. Units furnished approximately 1/4" (6mm) smaller than given opening dimensions when standard frame is ordered.
The CD50CE may be used in systems with total pressures exceeding 3.5" by reducing damper section width as indicated. Example: Maximum design total pressure of 8.5" w.g. would require CD50CE damper with maximum section width of 36" (914).

Pressure limitations shown above allow maximum blade deflection of 1/180 of span on 60" (1524) damper widths. Deflections in other damper widths (less than 48" (1219)) at higher pressures shown will result in blade deflection substantially less than 1/180 of span.

Ruskin Company certifies that the CD50CE shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA International Certified Ratings Seal applies to Air Performance and Air Leakage.

Leakage testing conducted in accordance with AMCA Standard 500-D-98. Torque applied holding damper closed, 5 in. lbs./sq. ft. on opposed blade dampers and 7 in. lbs./sq. ft. on parallel blade dampers. Air leakage is based on operation between 50°F to 104°F.

All data corrected to represent standard air density 0.075 lbs/ft³.

CD50CE sizes 12 x 12, 24 x 24, 48 x 12, 12 x 48, 36 x 36 (305 x 305, 610 x 610, 1219 x 305, 305 x 1219, 914 x 914)

All data corrected to represent standard air at a density of 0.075 lbs/ft³.
### DIMENSIONAL INFORMATION

#### CD50CE SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans, or in accordance with schedules. Low leakage dampers shall meet the following minimum construction standards: Frames shall be 5" x 1" x .125" (minimum thickness) (127 x 25 x 3.2) 6063T6 high yield extruded aluminum hat channel with hat mounting flanges on both sides of the frame. Each corner shall be reinforced with two die formed internal braces and machine staked for maximum rigidity. Blades shall be airfoil type 6063T6 high yield extruded aluminum (maximum 6" [152] depth) with integral structural reinforcing tube running full length of each blade.

Blade edge seals shall be extruded double edge design with inflatable pocket which enables air pressure from either direction to assist in blade to blade seal off. Blades seals shall be mechanically locked in extruded blade slots, yet shall be easily replaceable in field. Adhesive or clip-on type blade seals are not acceptable. Bearings shall be non-corrosive molded synthetic. Axles shall be stainless steel hexagonal (round not acceptable) to provide positive locking connection to blades and linkage. Linkage shall be stainless steel concealed in frame. Submittal must include leakage, maximum air flow and maximum pressure ratings based on AMCA Publication 500. Damper shall be tested and licensed in accordance with AMCA 511 for Air Performance and Air Leakage. Damper widths from 12" to 60" (305 to 1524) wide shall not leak any greater than 8 cfm sq. ft. @ 4" w.g. and a maximum of 3 CFM sq. ft. @ 1" w.g. Dampers shall be in all respects equivalent to Ruskin Model CD50CE.