

TED40x2 LOW LEAKAGE INSULATED CONTROL DAMPER EXTRUDED ALUMINUM

FEATURES

The TED40x2 offers leakage of 6 cfm/sq. ft. at 4" w.g. It features the most effective method of energy-saving insulation. When closed, it traps a minimum 4" (102) dead air space between the double blade assembly. A thermal break between frame sections prevents heat transmission through the frame. As an added feature the blade cavities are filled with urethane foam. This damper may be used in conjunction with a Ruskin stationary louver to achieve desired insulation performance.

Linkage is concealed in frame and out of airstream for low maintenance and reduced air turbulence. Hexagonal axles positively lock axles to blades. Blade edge seals feature unique double edge, inflatable pocket design that enables higher pressure on either side of damper to assist in tight blade-to-blade seal off. Seals are mechanically locked in extruded blade slots, yet are easily replaced in the field.

STANDARD CONSTRUCTION

FRAME

8 1/8" x 1" (206 x 25) x 6063T6 extruded aluminum channel with .081" (2.1) minimum wall thickness. Mounting flanges on both sides of frame. Thermal gasket between frame sections.

BLADES

4" (102) wide, 6063T6 heavy gauge extruded aluminum, airfoil shaped blades with polyurethane foam filled cavities.

LINKAGE

Concealed.

AXLES

1/2" (13) plated steel hex.

BEARINGS

Molded synthetic.

SEALS

Blade Seal – Extruded Ruskiprene
-72°F to +185°F (-58°C to +85°F).
Jamb – Flexible metal compression type.

CONTROL SHAFT

6" x 1/2" (152 x 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, parallel action – 6"w x 6"h (152 x 152).
Two blade, parallel or opposed action – 6"w x 9"h (152 x 229).

MAXIMUM SIZE

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

NOTE:

- 1) TED40x2 is not recommended for installation with blades running vertically.
- 2) If damper is to be used in a fan discharge application, consult Ruskin.

Dimensions in parenthesis () indicate millimeters.

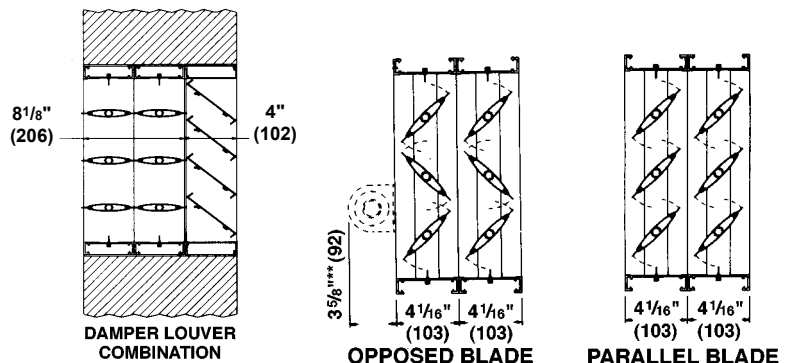
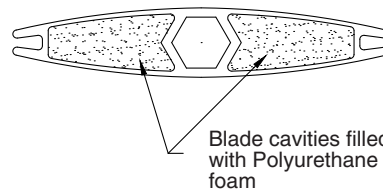
*Units furnished approximately 1/4" (6) smaller than given opening dimensions.



VARIATIONS

Variations to standard design are available at additional cost and include:

- Anodize finishes.
- Factory-installed, pneumatic and electric actuators. Consult Ruskin for actuator sizing.
- Frame-mounting bracket for simple field installation of most actuators.
- SP100 Switch Package to remotely indicate damper blade position.
- Front or rear flange frame.



SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans, or in accordance with schedules, low leakage insulating dampers, that meet the following minimum construction standards: Frames shall be 8¹/₈" x 1" (206 x 25) x .081" (2.1) (minimum wall thickness) 6063T6 extruded aluminum channel with mounting flanges on both sides of the frame. Each corner shall be reinforced with two dieformed internal braces and machine staked for maximum rigidity. Front and rear frame sections shall be separated by a thermal gasket break to prevent heat transmission through the frame. Damper shall trap a minimum of 4" (102) dead air space between the double blade assembly. Blades shall be airfoil type extruded aluminum (maximum 4" [102] depth) with integral structural reinforcing tube running full length of each blade.

Blades shall have cavities filled with polyurethane foam. 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 square or hexagonal (round not acceptable) to provide positive locking connection to blades and linkage. Linkage shall be concealed in frame. Dampers shall be in all respects equivalent to Ruskin Model TED40x2.

PERFORMANCE DATA

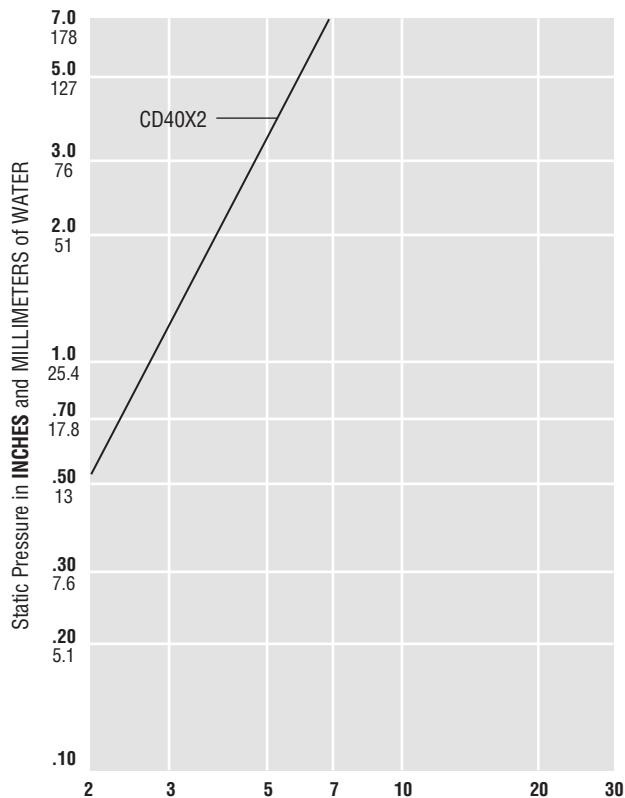
Damper Width Inches	Maximum System Inches	Maximum System Velocity	LEAKAGE*	
			% of Max Flow	CFM/Sq. Ft.
60" (1524)	3.0" w.g.	3000 FPM	.08%	2.5
48" (1219)	6.0" w.g.	4000 FPM	.07%	2.7
36" (914)	9.0" w.g.	4000 FPM	.08%	3.2
24" (610)	11.0" w.g.	5000 FPM	.07%	3.5
12" (305)	13.0" w.g.	6000 FPM	.08%	5.0

The TED40x2 may be used in systems with total pressure exceeding 3.0" w.g. by reducing the damper section width as indicated above. For example maximum design total pressure of 6" w.g. would require a damper with maximum section width of 48" (1219).

*Leakage information based on pressure differential of 1" w.g. tested per AMCA Standard 500.

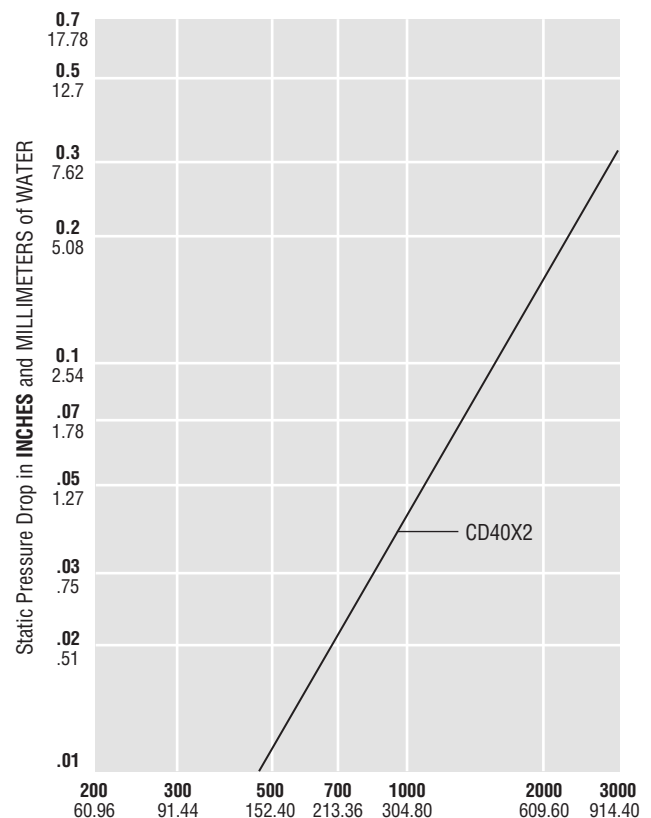
DAMPER PRESSURE DROP AND LEAKAGE

Air Leakage – Damper Closed (48" x 48" Size)



Air Leakage in **CFM/Sq. Ft.** through FACE AREA.
Tested per AMCA Std. 500, Fig. 5.5, plenum mounted.

Pressure Drop – Damper Open (24" x 24" Size)



Air Velocity in **FEET** and **METERS** per minute through FACE AREA. Tested per AMCA Std. 500, Fig. 5.3, ductwork upstream and down stream.



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