

TED40 ECONOMY INSULATED THINLINE CONTROL DAMPER EXTRUDED ALUMINUM

The TED40 provides low leakage and thermal performance with the thin line 4" extruded aluminum frame.

The blade profile stays within the frame in the full open position. Damper easily combines with most louver models. Blade seals are mechanically locked into extruded pockets at the ends of the blades.

STANDARD CONSTRUCTION

FRAME

4" x 1" (102 x 25) x 6063T6 extruded aluminum hat channel with .081" (2) minimum wall thickness. Mounting flanges on both sides of frame.

BLADES

4" (102) wide, 6063T6 heavy gage extruded aluminum, airfoil shaped blades. Polyurethane foam insulation fill in blade cavities.

LINKAGE

Concealed

AXLES

1/2" (13) plated steel hex.

BEARINGS

Molded synthetic.

SEALS

Extruded Ruskiprene® blade edge seal for -70°F to +185°F (-57°C to +85°C) and flexible metal compression type jamb seals.

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 apposed action – 6"w x 9"h (152 x 229).

MAXIMUM SIZE

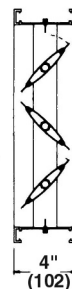
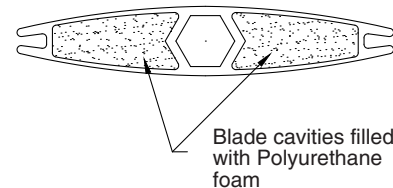
Single section – 60"w x 72"h (1524 x 1829).
Multiple section assembly – Unlimited size.

VARIATIONS

- Anodize finishes.
- Factory-installed, pneumatic and electric actuators (specific information required with order).
- Frame-mounting bracket for simple field installation of most actuators.
- SP100 Switch Package to remotely indicate damper blade position.
- Front or rear flange frame.

NOTE:

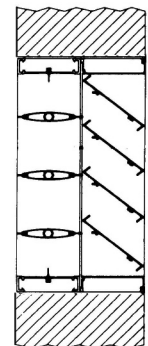
- 1) TED40 is not recommended for installation with blades running vertically unless unit is furnished without side seals.
- 2) If damper is to be used in a fan discharge application, consult Ruskin.



**OPPOSED
BLADE**



**PARALLEL
BLADE**



**DAMPER LOUVER
COMBINATION**

Dimensions in parenthesis () indicate millimeters.

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

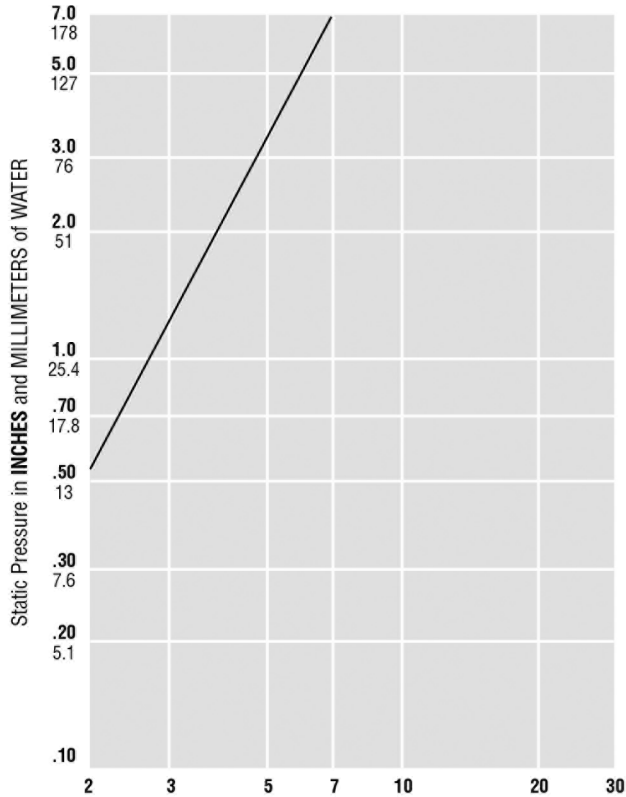
PERFORMANCE DATA

The TED40 may be used in systems with total pressures exceeding 3.0" w.g. by reducing damper section width as indicated. Pressure limitations shown allow maximum blade deflection of 1/180th of span on 60" (1524) damper widths.

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" (991)	8.5" w.g.	4000 FPM	.08	3.5
24" (610)	10.8" w.g.	5000 FPM	.07	3.5
12" (305)	13.0" w.g.	6000 FPM	.08	5.0

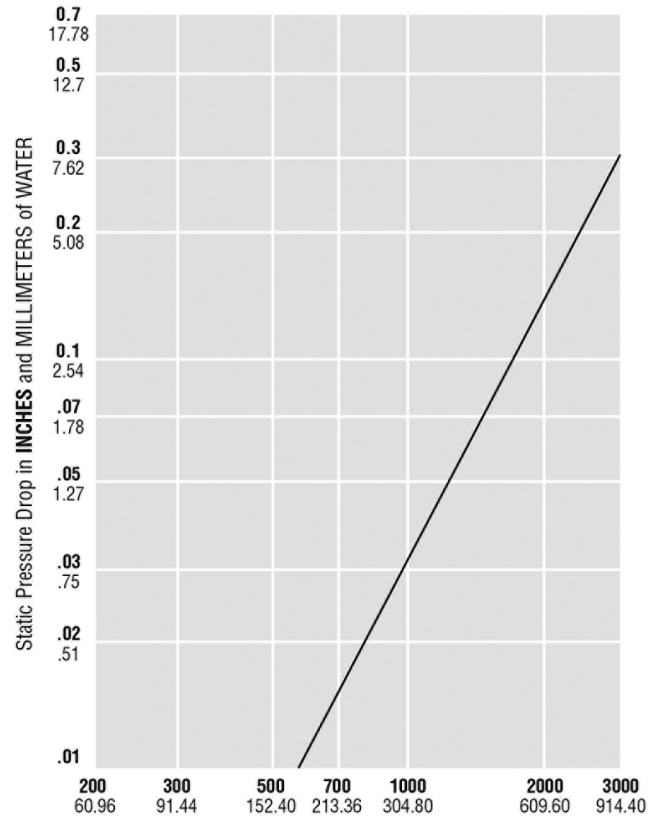
*Leakage information based on pressure differential of 1" w.g. Dimensions in parentheses () indicate millimeters.

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.

SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans, or in accordance with schedules, low leakage damper that meets the following minimum construction standards: frame shall be 4" x 1" x .081" (102 x 25 x 2.1) minimum thickness 6063-T6 extruded aluminum channel with 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 extruded aluminum, maximum 4" (102) depth, with integral structural reinforcing tube running full length of each blade. Blades shall have internal cavities filled with polyurethane foam. Blade edge seals shall be Ruskiprene double edge design with inflatable pocket which enables air pressure from either direction to assist in blade to blade seal off.

Blade 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. Damper manufacturer's literature (submitted for approval prior to installation) shall include performance data developed from testing in accordance with AMCA Standard 500. Dampers shall be in all respects equivalent to (specify) Ruskin Model TED40.



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