RUSKIN®

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THE TED!

TED50 Thermal Efficient Damper

Patent Pending!

AMCA RATINGS

- Efficiency — new AMCA rating!
- Air Performance
- Air Leakage

HIGH YIELD STRENGTH 6063-T6 ALUMINUM

- 30% higher yield strength vs. 6063-T5
- Anodized and Broken Frame models
- No thermal path (Detail A)

DUAL ACTION SYNTHETIC BEARING (DETAIL B)

- Molded hex polycarbonate bearings
- High impact acteyl copolymer outer sleeve

LOW PROFILE, FULLY CONCEALED SIDE LINKAGE

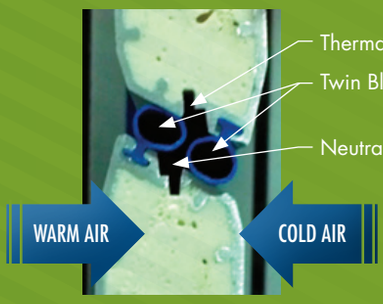
- Swedgelock™ linkage/axle system
- Low noise
- No maintenance or adjustments required

TWIN BLADE SEALS

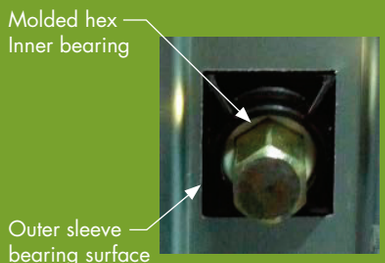
- Mechanically fastened to blades
- Air Barrier in neutral zone

COMPRESSION JAMB SEALS

- Light prohibiting



DETAIL A



DETAIL B

RUSKIN®

Our mission is to make you comfortable.

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TED50 Flyer – 4/14/replaces 1113

Thermal Efficient Dampers

Ruskin's TED50 is perfect for your application and represents a new line of high performance tested to the latest AMCA standards.

LEAKAGE DATA

Leakage testing is performed in accordance with ANSI/AMCA Standard 500-D, figure 5.5

Air performance testing is performed in accordance with ANSI/AMCA Standard 500-D, figures 5.2, 5.3 and 5.5

Data are based on a closing torque of 7 inch pounds /ft² (.80 N.m./m²).

Air leakage is based on operation between 32°F (0°C) and 120°F (49°C).

*** Leakage Class Definitions**

As defined by AMCA, the maximum allowable leakage is as follows.

Leakage Class 1A (is only defined @ 1" wg)

- 3 cfm/ft² (0.08 cmm/m²) @ 1" wg (0.25 kPa)

Leakage Class 1

- 4 cfm/ft² (0.11 cmm/m²) @ 1" wg (0.25 kPa)
- 8 cfm/ft² (0.23 cmm/m²) @ 4" wg (1 kPa)
- 11 cfm/ft² (0.31 cmm/m²) @ 8" wg (2 kPa)

TED50	LEAKAGE CLASS*			
Maximum Damper Width	1" w.g (0.25 kPa)	4" w.g (1 kPa)	8" w.g (2 kPa)	10" w.g. (2.5 kPa)
60" (1524mm)	1A	1	1	1

Ruskin Company certifies that model TED50 shown herein is licensed to bear the AMCA seal. The AMCA Certified Ratings Seal applies to Air Leakage, Air Performance and Energy Efficiency ratings. 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.

ENERGY EFFICIENCY PERFORMANCE DATA

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Ruskin model TED50 has an AMCA certified Thermal Efficiency Ratio of 345%

Thermal Efficiency Ratio (E) is a comparison of a tested damper's thermal performance against a known reference damper. A tested damper is compared to the thermal performance of a v-groove blade reference damper. A damper with the same thermal efficiency as the reference damper would have an E value of 0%, while a damper that is four times as efficient would have an E value of 200%. Torque, seal material, blade action, and flow direction influence thermal efficiency. Consult Ruskin for additional test data for specific application.

Torque

Ruskin model TED50 data are based on a closing torque of 7 inch pounds/ft² (.80 N.m./m²).

Test Setup Information

In accordance with AMCA 500-D figure 5.10, Thermal Efficiency Test, a 36" x 36" (914mm x 914mm) test sample is placed on the test fixture. Manufacturer's published torque is applied to hold the damper closed.

SUGGESTED SPECIFICATION

Furnish and install, where shown on plans and/or as indicated in schedules thermally efficient control dampers meeting the following minimum specifications.

Damper shall be Ruskin TED50. Damper frame shall be constructed of 6063T6 high yield extruded aluminum with a minimum wall thickness of .125" (3) and a yield stress of no less than 30,000psi. Low pressure drop aerodynamically shaped blades shall be constructed of 6063T6 high yield extruded aluminum with a minimum wall thickness of .125" (3) and a yield stress of no less than 30,000psi. Blades shall be filled with Polyurethane structural foam with a minimum density of 15 pcf. Insulated blades shall include a thermal break positioned between two blade seals to completely eliminate a thermal path from one side of the damper to the other. Thermal breaks on the blade edges shall not be visible when the damper is in the closed position. Damper assembly shall have a symmetrical design to ensure the resistance to airflow is identical from either direction. Axles shall be 1/2" (13) hexagonal plated steel material. Stainless steel axles shall be utilized when noted on the plans. Polycarbonate bearings shall be formed to the shape of the axle to reduce leakage through the frame. Bearings shall rotate inside an Acetyl Copolymer outer bearing surface to reduce torque and promote a smooth operation throughout the stroke of the damper. Zero tolerance Swedgelock™ linkage arms shall be permanently and mechanically secured to each axle, eliminating future need for field adjustment of the linkage assembly. Linkage assembly shall be set to predetermined parameters ensuring leakage performance for the life of the product. Linkage shall be completely concealed within the damper frame, out of the airstream. Stainless steel linkage of the same design shall be used when specified on the plans. Blade edge seals shall be extruded bulb Ruskiprene™ and shall be mechanically fastened to the blades. Jamb seals shall be low profile, light prohibiting, extruded Ruskiprene™ secured in extruded pockets of the damper frame. Stainless steel jamb seals creating a thermal path from one side of the blade to the other are not permitted. Damper shall be suitable for pressures up to 8 inches water gage (2kPa), velocities up to 4,000 fpm (20.3 m/s), standard air leakage of less than 8 cfm/ft2 at 4 inches water gage (2.44 cmm/m2 at 1 kPa), temperature range of -45°F to 185°F (-43°C to 85°C) and a thermal efficiency ratio no less than 345% on opposed blade dampers. All performance data shall be submitted to engineer of record for approval. Damper leakage, performance, and thermal efficiency shall be developed in accordance with the latest edition of AMCA 500-D. Damper shall be licensed to bear the AMCA certified ratings seal for Class 1A Performance.