RUSKIN
AUTHORITY IN AIR CONTROL

RUSKIN® Products for Data Centers

THE HIGHEST STANDARD OF AIR CONTROL

Many businesses today rely on data centers. Relocating data to these storage facilities means operations can free up vital resources for their on-site servers. Data centers run constantly, which means business owners face two important considerations: running costs (including power consumption), and HVAC equipment maintenance.

5 YEAR LIMITED WARRANTY

MANAGE AIRFLOW AND REDUCE ENERGY COSTS

Data centers must manage the external airflow in and out of a facility to reduce energy costs and maintain a safe working environment. With these goals in mind, managers of hyper-scaled cloud server facilities achieve greater efficiencies. This reduces HVAC energy costs while also protecting their equipment.

***Ruskin*® solutions can help data centers attain these benefits.**

Demanding applications require quality products that meet critical performance criteria. For more than 60 years, professionals in multiple industries have relied on *Ruskin* to deliver industry-leading air control in a variety of sophisticated building designs.

This makes *Ruskin* the ideal supplier of air control products for data centers because these buildings are expected to meet exceptionally rigorous standards for cooling and indoor air quality (IAQ).

RUSKIN AIR CONTROL SOLUTIONS – BENEFITS

- Quality backed by an exclusive five-year warranty
- Product support for applications customized for data centers
- Products manufactured to specific requirements
- Factory-mounted and commissioned controls
- Significant manufacturing capacity to ensure delivery meets customer deadlines
- Aluminum, hot-dip galvanized, and stainless-steel constructions
- High-performance airfoil designs
- Thermally insulated and non-insulated options
- Premium in-house acid-etch anodizing
- 20-year louver paint warranty

PROTECTING DATA CENTERS WITH *RUSKIN* SOLUTIONS

DATA CENTER DAMPERS

***Ruskin* has designed three commercial damper models, the CD60DC, the CD50DC and the TED50DC, for use in data center and high performance facilities.**

These models are designed for HVAC systems that serve data centers, facilities where high performance and reliability are essential. The DC models feature airfoil blades and have Class 1A leakage performance to provide impressive energy savings. Data centers require HVAC systems to maintain proper environmental conditions for optimal performance and reliability of Information Technology Equipment (ITE).

Air control dampers play a vital role in these systems and must perform at the highest levels possible. They also feature a new coupler that joins two damper sections without a jackshaft. This allows an actuator to be mounted on the side of the frame to provide a narrow profile where space is limited.

In addition, on larger multi-section sizes, the DC models provide enhanced operational performance with fewer moving parts.

These dampers are available in both galvanized steel and extruded aluminum.

For more information on data center dampers, visit www.ruskin.com/category/1169~data-center-dampers

KEY FEATURES

- Non-corrosive bearings
- Shake-proof linkage
- Ultra-low leakage
- Minimal maintenance
- Low noise levels
- Lowest pressure drop

CD60DC

High-Performance Galvanized Steel Airfoil Blade Damper - Air Movement and Control Association (AMCA) Class 1A Leakage Rating

CD50DC

High-Performance Control Damper - Extruded Aluminum | Airfoil Blade Damper - AMCA Class 1A Leakage Rating

TED50DC

Thermally Efficient Extruded Aluminum Insulated Airfoil Blade Damper - AMCA Class 1A Leakage Rating

PROTECTION FROM EXTREME WEATHER CONDITIONS

LOUVERS

Louvers are extremely important to the functioning of a building. Openings in the building are required to provide oxygen-rich fresh air and expel bad air. *Ruskin* louvers are specifically designed to meet any and all performance needs.

- **Wind-driven rain resistant**
  Protection for sensitive equipment from water
- **Low pressure differential**
  Energy savings
- **Missile impact resistant**
  Superior protection for people and equipment from storm events that create flying debris hazards

RECOMMENDED HIGH-PERFORMANCE LOUVERS

The **ELF6350DMP** is the industry-leading, free-area louver and provides exceptional protection against water penetration.

The **ELF6375DXH** is a louver that has a heavy-gauge frame and blade construction that offers an excellent pressure drop.

The **EME5625MD** and **EME3625MD** are ideal louvers for locations that need need protection from wind-driven rain. These specially designed, vertical-bladed models capture rain particles and drain water out of the front before it can build up and blow through the louver.

ELF6350DMP

HURRICANE LOUVERS

Ruskin supplies louvers that give data centers added protection in locations that are prone to hurricanes.

All hurricane models are approved for Miami-Dade County with an active Notice of Acceptance (NOA).

- ELF6375DXD
- ELF375DXD
- HZ700MD
- EME520MD
- EME3625MD

***Ruskin* designs and tests certain louvers to resist the rain penetration and wind pressure caused by hurricanes.** Using these louvers in hurricane zones means there is no need for additional dampers.

In applications where the pressure generated by high-velocity wind infiltration cannot be supported, additional protection is needed. Louvers with integral operable blades, or stationary louvers with dampers, are required to protect buildings during a hurricane.

For more information on hurricane louvers, visit www.ruskin.com/category/902~Hurricane-Louvers

amca WORLDWIDE CERTIFIED RATINGS WATER PENETRATION AIR PERFORMANCE WIND DRIVEN RAIN

TDI

amca LISTED HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND IMPACT RESISTANT LOUVER *Enhanced Protection Level E*

MIAMI-DADE COUNTY

EXTREME PROTECTION GRILLES

***Ruskin* models XP500 and XP500WD are louvers and grilles that meet the storm shelter requirements specified by the Federal Emergency Management Agency (FEMA).** Rated for tornado events, these products provide maximum protection from debris impacts while maintaining functionality during extreme weather conditions to allow outside air to flow in and out of the facility.

For more information on extreme performance louvers and grilles, including the XP500, visit www.ruskin.com/category/642~Extreme-Performance-Louvers-and-Grilles

XP500WD

ENHANCED PROTECTION LOUVERS

The EME420DDE and EME520DDE from *Ruskin* are wind-driven, rain-resistant louvers that meet the specifications for AMCA540 Missile Level E Impact testing at 55 mph (89 km/h). Both models are ideal for facilities with equipment that needs enhanced protection from extreme weather conditions.

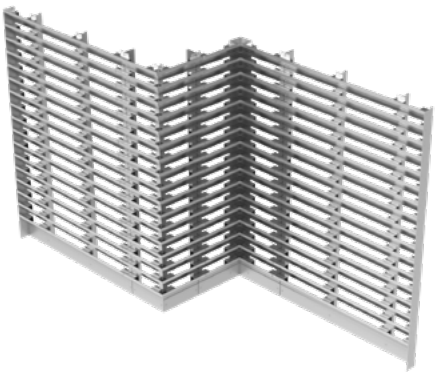
For more information visit www.ruskin.com/category/642~Extreme-Performance-Louvers-and-Grilles

EME420DDE,
EME520DDE

EQUIPMENT SCREENS

Screens, such as the EV811, are generally used to conceal equipment. However, they can also serve as protective barriers and are an economical alternative to concealment walls. Whether data centers require extensive air movement or complete concealment, *Ruskin* offers a wide range of products for partial to full sight-proof screening. All screens can be designed to meet a variety of wind loads and substrate conditions.

For more information on screens and grilles, visit www.ruskin.com/category/13~Screens-and-Grilles



EV811

RUSKIN HELPS YOU CREATE THE IDEAL WORK ENVIRONMENT

NOISE CONTROL SOLUTIONS

Data centers generate a lot of noise. In certain cases, the noise level can rise to 95 decibels. *Ruskin* designs and manufactures a complete line of noise-reducing products that are designed and installed by engineers who have decades of experience and knowledge creating solutions for data centers.

Our acoustical duct silencers, acoustical louvers, and modular acoustical panels provide industry-leading quality and unparalleled performance at an economical price.

ACOUSTICAL LOUVERS

Acoustical louvers use louver blades constructed from materials that absorb sound to reduce noise levels for both ingress and egress. These louvers are made from aluminum or steel and come in a variety of blade designs, such as box blade and airfoil.

They are generally used in office buildings and are occasionally recommended where sound attenuators cannot be installed. *Ruskin* acoustical louvers are designed to address the issue of acoustical attenuation across all eight octave bands and utilize an acoustical-grade fibrous media to cut noise levels.

For more information on acoustical louvers, visit www.ruskin.com/category/336~Acoustical-Louvers

ACOUSTIC DUCT SILENCERS

***Ruskin* noise control solutions include rectangular and tubular silencers.** They come in a variety of configurations and can be stacked into large banks, which accommodate a large number of duct sizes, eliminating expensive transitions. Double-wall, single-wall, and fan-mounted models are available.

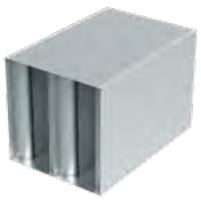
For more information on noise control panels and silencers, visit www.ruskin.com/category/597~Sound-Control

MODULAR ACOUSTIC PANELS

***Ruskin* Soundchek modular acoustic panels are suitable for numerous applications in data centers.** They are generally used for plenum, enclosure, and barrier wall applications, which means the panels are designed to fit in practically every situation that requires enclosure silencing.

For more information on *Ruskin* Soundchek modular acoustic panels, visit www.ruskin.com/model/soundchek

Soundchek panel enclosure



Sound attenuator

AIRFLOW MEASURING AND CONTROL

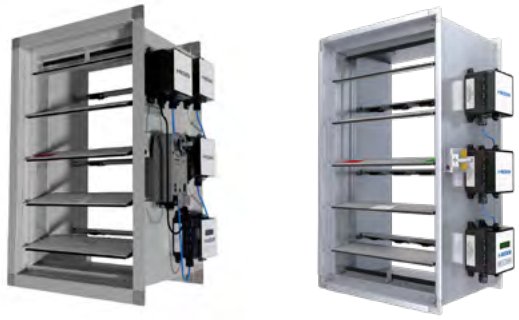
Data centers benefit from accurate airflow measurement and control for all spaces within the facility. Minimizing the energy consumption of a facility is of paramount importance in reducing operating costs and in creating energy-efficient processes throughout all systems. A data center's greatest cost is frequently associated with inefficient management of airflow as up to 35 percent of a typical facility's usage is associated with HVAC and cooling systems.

In support of efforts to achieve energy efficiency, *Ruskin* supplies a comprehensive line of airflow management products that can be employed anywhere in the building. These products include airflow measuring devices that utilize differential pressure technology for high-velocity applications, combination units that both measure and control the airflow to maintain specified cubic-feet-per-minute setpoints, and advanced solutions that utilize thermal dispersion technology with microprocessor-based controls to communicate with any building automation system.

Ruskin products can be configured and customized to meet the job-specific requirements of a particular data center and aid compliance with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 62 and satisfying Leadership in Energy and Environmental Design (LEED) prerequisites.

The AMS provides precise airflow measurement utilizing velocity pressure technology

The TDP05K is a highly accurate electronic airflow and temperature measuring device that utilizes advanced thermal dispersion technology



The AIRFLOW-IQ Series - electronic airflow measuring station with Class 1A control damper and air measurement BAS interface actuator

Airflow measuring and control products suited to support efficient data center airflow:

- TDP05K
- AIRFLOW-IQ Series
- Air Measuring Station (AMS)
- AMS050

For more information on airflow measuring and control, visit www.ruskin.com/category/499~Air-Measuring-and-Control

REDUCE UTILITY COSTS USING ECONOMIZERS

Data centers must keep outside air flowing safely and efficiently. To maintain this key function, the *Ruskin* Low Leak Economizer utilizes a parallel blade design, which generates less static pressure than an opposed blade setup.

The Low Leak Economizer meets the requirements specified by both Title 24 and the ASHRAE 90.1. A parallel-blade economizer is less likely to starve the rooftop unit of air in the 50 percent position unless significant modifications are made to the ratio of the damper openings.

When the economizer is not operational, the AMCA Certified Outside Air Class 1A damper ensures the blades close tightly and do not admit outside air and humidity into the building. Therefore, *Ruskin* economizers reduce utility costs and create a more comfortable environment in critical areas within the data center.

For more information visit www.ruskin.com/category/1006~economizers

AUTHORITY IN AIR CONTROL

Ruskin delivers the most accurate and innovative solutions for data centers. They are easy to install, easy to use, and are customizable to the needs of any building automation system.

Ruskin® 3900 Dr. Greaves Rd · Kansas City, MO 64030 **P:** (816) 761-7476 **F:** (816) 765-8955 **E:** ruskin@ruskin.com **W:** www.ruskin.com