

Displacement Ventilation

LOW VELOCITY SUPPLY DIFFUSERS



Intelligent Design



Occupant Comfort



Energy Efficient



KRUEGER

Excellence in Air Distribution

BY **Halton**

Design Sustainable Schools with Displacement Ventilation Products

The complete air distribution solution for Displacement Ventilation. Learn more about how you can meet tomorrow's energy and ventilation needs today.

Displacement ventilation products from *Krueger by Halton* are a great way to satisfy engineering requirements for occupant comfort, earn LEED points for implementing sustainable design, and most importantly, promote a healthy and productive environment for students and teachers.



+ Occupant Comfort

As conditioned, cooler air flows from the displacement diffusers, the heat from both people and equipment mix to provide a comfortable temperature.

+ Contaminant & Odor Reduction

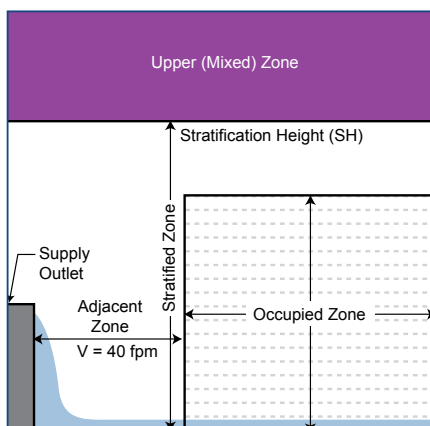
As warm air is displaced into the upper stratified zone, contaminants and odors that are found in laboratories, cafeterias, gymnasiums, and locker rooms are carried with it. As a result, the occupied zone is typically cleaner than what is achieved using well mixed systems. Even better, it helps lower CO₂ levels.

+ Energy Savings

By cooling only the occupied zone, less energy and air flow capacity may be required to condition the space. Additionally, you can achieve longer periods of free cooling.

Displacement Ventilation Application

Thermal Displacement Ventilation (DV) offers quality solutions for more than just schools, in fact, it is well suited for high ceiling applications, such as lobbies, theaters, malls, conference rooms, along with industrial applications where high contaminant loads are present. By introducing low velocity air at the floor level, we use air's natural movement to displace room contaminants and excessive heat into the stratified zone. Once exhausted, the result is a much cleaner occupied zone, when compared to conventional overhead mixed air distribution systems.



To ensure a successful DV installation, proper diffuser selection along with placement and planning of objects in the space are crucial. The 'adjacent zone', as shown in the figure to the left, will provide the distance from the diffuser in which the supply velocity is below draughty conditions. Lengths of the 'Adjacent Zone' can vary and are a function of diffuser type, room ΔT , and cfm. *Krueger by Halton* is proud to supply industry leading software to assist in the calculation of crucial parameters and capacities of your unique application. Contact us for more information at www.krueger-hvac.com.

Earning LEED Points

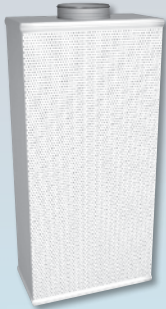
Displacement Ventilation provides the quietest solution for air distribution in schools, making the LEED for Schools acoustical credit easy to obtain.

ASHRAE 62.1 allows a ventilation reduction of 25% with DV, saving energy. All of these benefits can assist in gaining LEED points.

As Underfloor Air Distribution (UFAD) systems use the same temperature supply air as DV, many projects have been designed with both DV and UFAD in the same system.

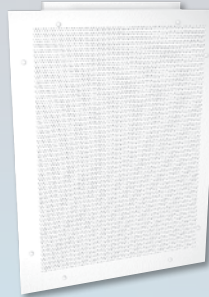
Model Selection, Features, & Benefits

AFA: Rectangular, Low-Velocity Supply Unit



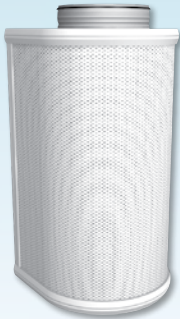
- Ideal for wall or ceiling installation.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.

AFE: Flat Faced, Low-Velocity Supply Unit



- Flush face wall installation.
- Ideal for shallow installation applications.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.

AFB: Half-Round, Low-Velocity Supply Unit



- High Capacity 180° floor level discharge.
- Ideal for industrial applications.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.

AFF: Semi-Circular, Low-Velocity Supply Unit



- Ideal for shallow installation applications requiring 180° floor level discharge.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.

AFC: Round, Low-Velocity Supply Unit



- 360° floor level discharge.
- Ideal for central room supply locations.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.

AFFP: Semi-Circular, Low-Velocity Supply Unit



- High capacity 180° floor level discharge.
- Ideal for commercial retail or restaurant installations.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.

AFD: Half-Oval, Low-Velocity Supply Unit



- High capacity 180° floor level discharge.
- Ideal for theaters and auditoriums.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.

AFQ: Corner Round, Low-Velocity Supply Unit



- 90° floor level discharge for corner applications.
- Removable panels for easy cleaning.
- Non-clogging design.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



For 24-hour access, visit
WWW.KRUEGER-HVAC.COM



Learn More About Other Krueger Air Distribution Solutions

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- Dual Duct
- Single Duct
- Fan Powered

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- Raised Floor Diffusers
- Raised Floor Terminal Units

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- Critical Room Solutions
- Linear Slot Diffusers
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- Plaque & Architectural
- Plenum Slot
- Round

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- Duct Mounted
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- Return
- Security
- Stainless Steel
- Supply
- Transfer

Displacement Ventilation

Chilled Beams

Accessories & Dampers

Engineering Information

Krueger continues to lead the industry in the development of innovative products and air distribution solutions. To learn more about what we can do for you, contact your local Krueger representative or visit us on the web at www.krueger-hvac.com.



BY **Halton**

Provider of Air Distribution Solutions

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ISO 9001:2008 Certified

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Supporting Sustainable
 Green Building Design