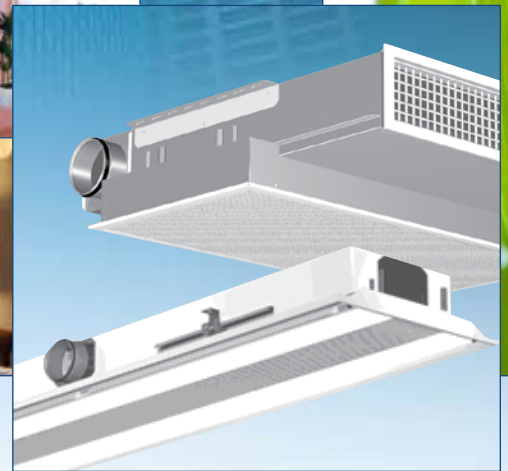


Chilled Beam Solutions

WATER ASSISTED SUPPLY DIFFUSERS



Intelligent Design



Occupant Comfort



Energy Efficient



KRUEGER

Excellence in Air Distribution

BY **Halton**

Design Sustainable Buildings with Chilled Beams



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

+ Occupant Comfort

Chilled Beams distribute conditioned air above the occupied zone at relatively low velocities and temperature differences with a fixed quantity of ventilation air. This results in uniform conditions throughout the occupied space, with excellent ventilation. The combination maximizes occupant satisfaction with the environment, which assures productivity.

+ Low Sound Levels

The low pressure induction nozzles, combined with sensible cooling coils, result in sound levels well below the maximum recommended for any type of space. This makes them well suited for schools, hotel rooms and health care facilities. Future acoustical requirements will require increasingly lower sound levels from the HVAC equipment.

+ Space Savings

Chilled Beams have a very low space requirement in the plenum, resulting in minimal plenum depth and allowing more flexibility in location of units. Our design allows for sustainable installations through a number of design characteristics maximizing the flexibility of a Chilled Beam installation.

+ Lower Operating Costs

Water is much more efficient than air in transferring energy, which lowers the mechanical system's energy consumption. Higher water and air temperatures may enable the use of longer free cooling periods. With the exception of the optional, supplemental VAV damper on some models, Chilled Beams have no moving parts, thereby reducing maintenance costs compared to other systems.

Chilled Beam Application

Chilled Beam systems typically employ Dedicated Outdoor Air Systems (DOAS) to provide fixed quantities of ventilation air directly to each occupied space. They can handle up to 40 BTUH/Sq.Ft. (12 W/Sq.Ft.) of interior load, and can provide up to 200 BTUH/Linear Ft. of perimeter heat demand. Successful applications include open plan as well as closed office, hotels, hospitals, schools, retail spaces, lobbies, and halls. While Chilled Beam applications require careful attention to building construction to assure proper moisture control, new buildings are able to benefit from complimentary savings resulting from the design advantages of Chilled Beams.

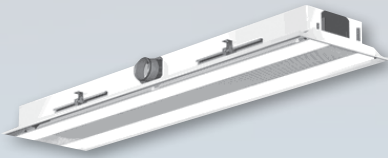
By carefully selecting the initial layouts and combinations of unit types, control valves, and thermostats, a very sustainable design can be established. The unique supplementary ventilation air damper in the 'sustainable' units allows for dynamic ventilation rate override as space needs vary. The adjustable discharge velocity control dampers allow changes in airflow patterns within the space. Both allow changes without affecting overall system balancing.

Many Chilled Beam projects can benefit from the use of the Krueger DOAS Series Fan Terminal Unit in locations where a Chilled Beam may be considered less than an optimum application. These locations include perimeter zones where the heating demand exceeds 200 BTUH/Linear Ft. of perimeter wall and in building lobbies, where outdoor humidity may raise condensation potentials. The DOAS Terminal Unit uses the same mechanical systems as Chilled Beams, including a sensible cooling coil, but uses standard ducted overhead air distribution products. The DOAS Terminal Unit may be located away from high humidity areas and is insulated to reduce primary air condensation potentials. The combination of Chilled Beams and the DOAS Series Fan Terminal Unit provides the ultimate sustainable solution for many applications.

Earning LEED Points

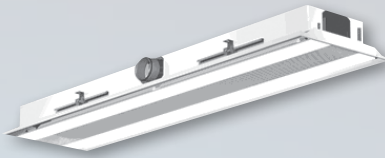
Several LEED points may be gained through proper application of a Chilled Beam system. Chilled Beams have been long preferred for hotel guest rooms with high requirements for thermal comfort and silent operation. They are also ideal for buildings where high indoor environmental quality and individual room control are appreciated. Minimal air and water flow rates mean energy efficient solutions with enhanced life-cycle performance. Chilled Beams adapt easily to free energy sources and heat pumps. LEED points may be gained through Innovation, Energy, and Comfort criteria.

Model Selection, Features, & Benefits



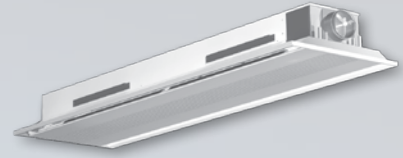
ADC:

- Ideal for open space offices.
- VAV damper for sustainable solutions.
- Compatible with 24" on center grid systems.
- Adjustable Velocity Control (HVC).
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



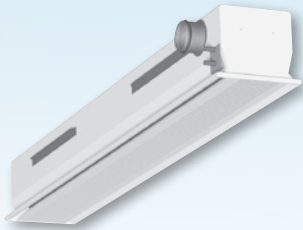
AHC:

- Ideal for high capacity applications.
- VAV damper for sustainable solutions.
- Compatible with 24" on center grid systems.
- Adjustable Velocity Control (HVC).
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



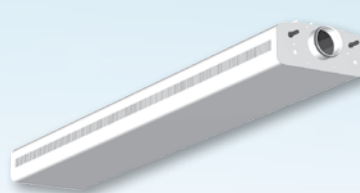
ABC:

- Standard cooling and/or heating.
- Provides enhanced life-cycle performance through low water and airflow rates.
- Compatible with 24" on center grid systems.
- Adjustable Velocity Control (HVC).
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



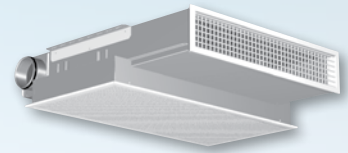
ABD:

- Compatible with 12" on center grid systems.
- Combined cooling and/or heating
- Adjustable Velocity Control (HVC).
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



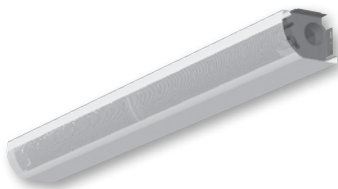
ACE:

- Exposed, architecturally friendly installation.
- VAV damper for sustainable solutions.
- Compatible with 24" on center grid systems.
- Adjustable Velocity Control (HVC).
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



AHH:

- Ideal for hotel guest and other resident rooms.
- Bulkhead installation.
- Adjustable Velocity Control (HVC).
- Low sound levels.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



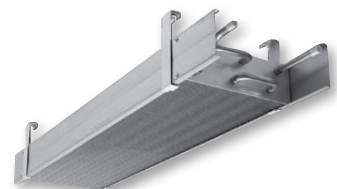
ABH:

- Ideal for hotel guest and other resident rooms.
- Exposed, architecturally friendly installation.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



APA:

- Passive operation.
- Installation flush or below ceiling.
- No moving parts.
- Steel construction.
- Standard Finish: White (RAL9010) Polyester Paint.



APT:

- Passive operation.
- Ideal for installation above open ceiling grids.
- No moving parts.
- Steel construction.
- Standard Finish: Mill



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Learn More About Other Krueger Air Distribution Solutions

Terminal Units

Bypass & Retrofit
Dual Duct
Single Duct
Fan Powered

Raised Floor

Raised Floor Diffusers
Raised Floor Terminal Units

Diffusers

Air Nozzles
Critical Room Solutions
Linear Slot Diffusers
Louvered Diffusers
Plaque & Architectural
Plenum Slot
Round

Grilles & Registers

Duct Mounted
Industrial
Linear Bar
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