

Introduction: Active / Adaptable Chilled Beams



Patient Care Application



Custom Unit with Integral Lighting Application

The *Krueger by Halton* active, adaptable chilled beams with an Air Quality Control Valve (HAQ) are water assisted air distribution devices designed to maximize on thermal comfort, indoor air quality (IAQ), and energy savings through the combined use of pressurized supply air, sensible conditioning, and induced room air. Similar to sustainable chilled beams in function, the active, adaptable chilled beams have the distinct advantage of the integral HAQ. The HAQ is designed to allow supplemental primary air to be supplied to the space. Primary air supplied via the HAQ valve and provides a significant increase in sensible capacity; further maximizing thermal comfort and IAQ without affecting the active coil performance.

These devices are best suited for use in areas such as office buildings, healthcare facilities, and other types of buildings with open spaces. They are the perfect fit for buildings with high churn rates within the space where adaptability would be beneficial. *Krueger by Halton* adaptable chilled beams are available for both lay-in and exposed mounting applications in various widths and lengths, making them a flexible option for just about any application. Low sound levels coupled with peak energy efficiency make the chilled beams the ideal choice for not only new building construction, but retrofit projects as well.

MODELS

ACE - Active Adaptable, Exposed Chilled Beam

STANDARD FEATURES

- Standard finish is Polyester Painted White (RAL 9010).
- Combined cooling and heating coil.
- 2 and 4 pipe coil configuration.
- Cooling/heating water pipe connections are copper 1/2" and 3/8" diameter respectively.
- Aluminum fins on water coil.
- Multiple nozzle sizes available for demand based performance.
- 1-way and 2-way supply.
- Perforated, hinged access panel for easy room side access to coil.
- 20 gauge, galvanized steel casing.
- 5" diameter primary air duct connections.
- Low sound levels.
- *Krueger by Halton* Velocity Control (HVC).
- Manually operated *Krueger by Halton* Air Quality Control (HAQ).

PERFORMANCE DATA:

Unlike a typical grille, register, or diffuser; chilled beams have a level of complexity which demands a more robust presentation of performance. Download KHIT, our chilled beam software, from our website at www.krueger-hvac.com. This powerful tool provides an accurate representation of a given product's performance. Each input allows you to understand the room and/or unit performance based on your exact input parameters. For further assistance in selecting or specifying *Krueger by Halton* chilled beams, contact your local representative or send us an email at kruegerinfo@krueger-hvac.com.

Introduction: ACE

The ACE adaptable exposed mounted chilled beam is the most aesthetically appealing design in the market today. It offers many options to allow for many different architectural styles and performance options. Additionally, by using *Krueger by Halton's* HAQ control, the air flow to the unit can be adjusted while keeping the plenum pressure constant, allowing for adaptability to room layout changes.

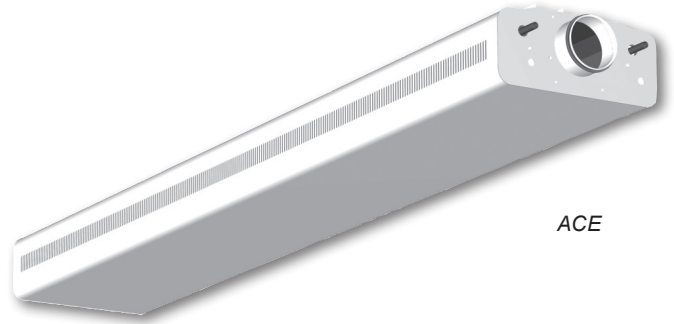
MODEL

ACE - Active Adaptable Exposed Chilled Beam

FEATURED OPTIONS

(See STANDARD OPTIONS on Page C3-28)

- 4 nozzle sizes available.
- Available in lengths from 48" to 192" (4" increments).
- Venting valves for cooling and/or heating coil.
- Custom color matching available.
- Primary air flow adjustment damper.
- Electronically actuated *Krueger by Halton* Air Quality Control (HAQ).
- Rounded or angular casing.
- Round or oval return face perforation.
- Adjustable or constant flow, factory mounted water valve and actuator (24V or 230V).
- Cable tray.
- 12" or 16" duct cover.

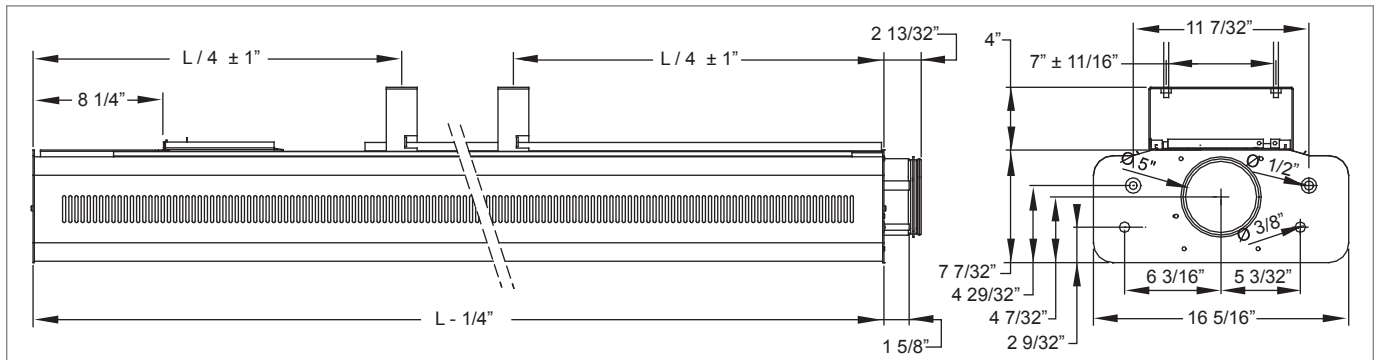


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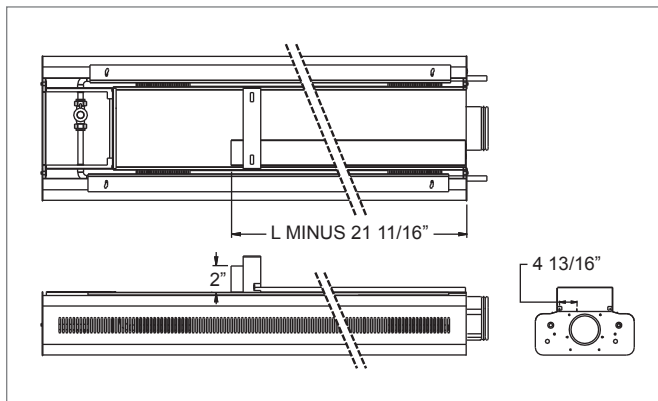
- * *Dependent on third party CO₂ or occupancy monitoring.*

ACE Dimensional Information

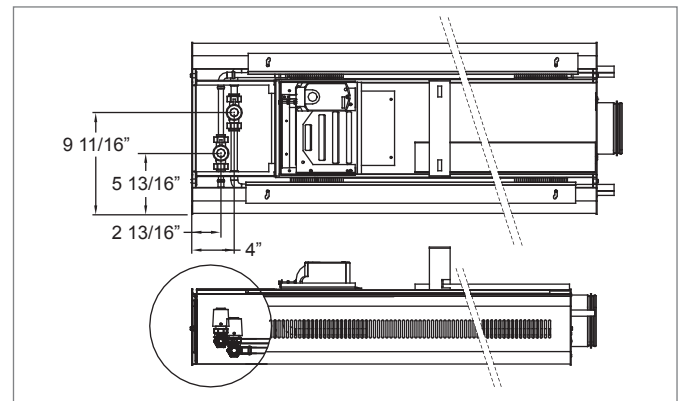
ACE SIDE VIEWS



CABLE TRAY



VALVES



NOTES: All dimensions in inches. Cooling/heating water pipe connections are copper 1/2" and 3/8" with wall thickness of 0.04". The maximum operating pressure for chilled/hot water pipework is 150 psi. The front panel of the chilled beam is divided into two equal sections in chilled beams longer than 96". Combined cooling and heating coil: *Krueger by Halton* Air Quality Control (HAQ damper - manual operation): Located in the non-connection end of the beam. *Krueger by Halton* Air Quality Control (HAQ damper - motorized operation): In retrofitting, motorization of HAQ is possible when manual version is selected. Control Valve: Valves with adjustable kvs value or with max flow limit function. Delivered factory fitted or loose. If control valves are factory fitted, the location of the pipe connections cannot be changed on the site. Delivered factory fitted or loose Cable length 47.24". Cable Tray: Prepainted, Length = Beam - 22". Airflow adjustment damper (MSM damper): Removable through access panel. Duct cover: Self-supporting cover plate. No need for installation brackets. Available in length 12, 16, 20, 24 inches.

ACE Suggested Specification & Configuration

CHILLED BEAMS

ACE

The primary airflow rate shall be adjustable over a wide range via a separate supply air unit of the chilled beam. Adjustment of the airflow rate shall not have any effect on induced airflow rate through the coil. The induced room airflow rate shall be manually adjustable to three positions without influencing the primary supply air flow rate.

Supply airflow rate shall be manually adjustable, or the unit shall be equipped with actuator for demand-based control of airflow rate (optional). Control of supply airflow rate shall not have any effect on coil cooling and heating capacities. The chilled beam with an adjustable airflow rate shall have only one duct connection. The appearance of the chilled beams with constant airflow and adjustable airflow rate shall be the same.

The unit is an active chilled beam for exposed installation with 2-way supply air. The front panel shall be easily opened and detached from either side without the use of any special tools.

The active chilled beam shall be 16" wide and 7" high with an inlet duct diameter of 5". The chilled beam shall have a duct cover extension to cover the connection duct and pipe installations (optional).

The chilled beam shall have an airflow adjustment damper. The damper shall be removable via an access panel. The front panel and side panels shall be made of prepainted galvanized steel plates. All visible parts shall be white RAL 9010, 20% gloss.

The chilled beam shall be equipped with a cable tray (optional).

All pipes shall be manufactured from copper, connection pipes with a wall thickness of 0.04".

The cooling heat exchanger shall consist of six 0.6" pipes connected in series. The fins of the heat exchanger shall be manufactured from aluminum. Coil fins shall be spaced at 6 FPI. Heating shall be incorporated within the heat exchanger via two 0.4" pipes connected in series. All joints shall be factory pressure-tested. The maximum operating pressure of pipework shall be 150 psi.

Each active chilled beam shall be protected by a removable plastic coating and individually packed in a plastic bag. Duct connection and pipe ends shall be sealed for transit.

Each chilled beam shall be identifiable by a serial number printed on a label attached to the active chilled beam.

- 1. MODEL: (XXX)**
ACE - Adaptable Active Chilled Beam
- 2. DIRECTION / NOZZLE TYPE: (X)**
A - 2-Way / Nozzle 1
B - 2-Way / Nozzle 2
C - 2-Way / Nozzle 3
D - 2-Way / Nozzle 4
- 3. BEAM LENGTH: (XXX)**
48" - 192" (Increments of 4")
- 4. COIL LENGTH: (XXX)**
35" - 179" (Increments of 4") *
- 5. COIL TYPE: (X)**
C - Cooling Only
H - Cooling and Heating
D - Cooling Only, Venting Valves
F - Cooling and Heating, Venting Valves
- 6. DAMPER: (X)**
N - No
Y - Yes
- 7. AIR QUALITY CONTROL: (X)**
A - Manual
R - Retrofit Possibility
B - Motorized
- 8. APPEARANCE: (X)**
A - Rounded, Oval Perforation
B - Rounded, Round Perforation
C - Angular, Oval Perforation
D - Angular, Round Perforation
- 9. CONTROL VALVE & ACTUATORS**: (XXX)**
000 - None
A01 - Adjustable KV Value, Factory Mounted, No Actuator
A03 - Adjust. KV Value, Factory Mounted, 24 V Act.
A07 - Constant-Flow-Mounted
A09 - Constant-Flow-Mounted, 24 V Act.
A11 - Constant-Flow-Mounted, 230 V Act.
- 10. ACCESSORY 1: (XX)**
00 - None
KH - Cable Tray
- 11. ACCESSORY 2: (XXXX)**
0000 - None
DC12 - 12" Duct Cover
DC16 - 16" Duct Cover
DC20 - 20" Duct Cover
DC24 - 24" Duct Cover
- 12. FINISH: (XXX)**
WHT - White (RAL-9010)
GRY - Gray
BLK - Black
SPL - Special

*The damper is removable through access panel.
* Maximum Coil Length is Beam Length less 13".
** Additional voltages available upon request.*

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SAMPLE CONFIGURATION: ACE - D - 100 - 83 - C - Y - B - D - 000 - KH - DC20 - BLK