

INTRODUCTION

The active chilled beam is designed for recessed applications and features an optimized nozzle configuration that delivers high cooling capacity with low noise levels. It incorporates a vertical coil equipped with a condensate pan and is engineered to integrate seamlessly with Krueger's 1700 grille. Additionally, its optimized diffuser geometry enhances air distribution to maximize occupant comfort.

MODEL

BAR - Vertical Recessed Chilled Beam

FEATURES

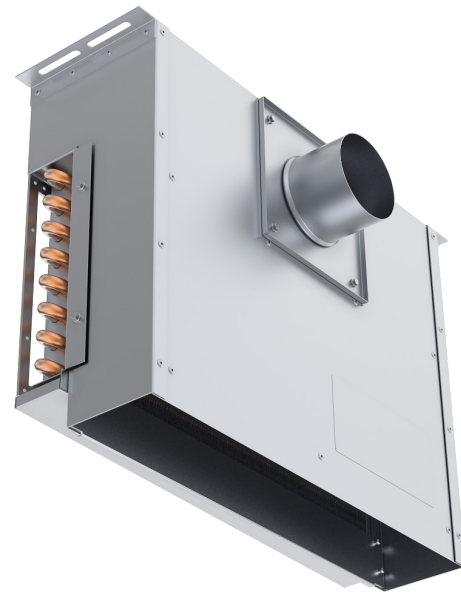
- 2' to 8' lengths
- Left hand or right hand coil connections
- Rear air inlet locations
- 2-pipe and 4-pipe coil configurations
- Configured nozzle geometry for capacity optimization
- Commissioning port with roomside access for balancing
- Mounting brackets with adjustments in two directions
- 1/2" Sweat water coil connections
- Coil air vent
- Condensate tray with drain connection for field plumbing

OPTIONS

- Internal closed cell foam insulation
- Coil drain valve
- 1/2" MPT water coil connections
- 12", 18" or 24" stainless steel braided hoses

ADVANTAGES

- Removal of high thermal loads is possible in this air/water system
- The size of the air duct system is reduced to a minimum, due to the low supply of primary air
- Substantial reduction in the operating costs, due to low primary air volume
- Improvement of the thermal comfort inside the room
- Contributing sound levels below NC-30



APPLICATION

Krueger active chilled beams benefit from the use of using hydronic coils and induced air to reduce energy consumption associated with removal of sensible thermal loads. The primary air is supplied to the chilled beam subsequent to it being discharged through a series of nozzles located along the length of the beam. The nozzles inject the primary air into the mixing chamber at velocities capable of inducing plenum or soffit air through the water coil and where it mixes with the primary supply air. This mixture of air is then discharged into the space through ceiling slot diffusers. This provides high cooling outputs with low amounts of primary air. The reduced volume of air results in the reduction of the air handler capacity and size, smaller duct sizes, and the overall energy consumption.

The supplied air from the air handling unit is tempered and dehumidified to handle the latent load. The remaining loads in the space are addressed with the heat exchanger which is incorporated into the chilled beam. Applications with low latent cooling loads could use 100% outdoor air allowing for use of a dedicated outdoor air system with energy recovery further reducing total system energy consumption.

The BARs are offered for both cooling and heating, lengths from 2' to 8'. They can be easily integrated with Krueger's 1700 grille. Units can have the 1700 grille installed directly to the discharge of the chilled beam, or BAR beams can be located in specific locations above a long run of 1700 grilles, creating active and inactive sections.