

INTRODUCTION

The active modular chilled beam features a 4-way air distribution pattern and an optimized nozzle design that delivers high capacity with low noise levels, while its modular form complements modern commercial architectural styling. Designed to fit seamlessly into standard 24-inch ceiling systems, it incorporates optimized diffuser geometry to improve air distribution and enhance overall occupant comfort.

MODEL

BAM - Modular Active Chilled Beam

FEATURES

- 4-way air distribution pattern
- 24" and 48" lengths
- 24" width
- Perforated induced air grille
- Side coil connections
- Top or side air inlet locations
- 2-pipe and 4-pipe coil configurations
- Configured nozzle geometry for capacity optimization
- Removable induced air grille for roomside coil access
- Commissioning port with roomside access for balancing
- Mounting brackets with adjustments in two directions
- Durable powder coat finish
- 1/2" Sweat water coil connections
- Coil air vent
- Coil drain valve

OPTIONS

- Internal closed cell foam insulation
- 1/2" or 3/4" MPT water coil connections
- 12", 18" or 24" stainless steel braided hoses
- Lay-in and narrow tee frame styles
- Coil lint screen
- Constant volume regulator

FINISHES

- Standard Finish - #WHT British White
- Optional Finish - #BLK Black

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 operating costs, due to low primary air volume
- Improvement of thermal comfort inside the room
- Suitable for several standard ceiling grids
- Contributing sound levels below NC-30



APPLICATION

Krueger active chilled beams feature the aerodynamic properties of Krueger ceiling diffusers and benefit from the use of 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 perimeter of the beam. The nozzles inject the primary air into the mixing chamber at velocities capable of inducing room air through the water coil, where it mixes with the primary supply air. This mixture of air is then discharged into the space through the 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 the use of a dedicated outdoor air system with energy recovery, further reducing total system energy consumption.

The BAMs are offered for both cooling and heating, and in 24" x 24" and 48" x 24" module sizes. They can be easily integrated into different grid styles, such as a suspended ceiling or even in drywall ceilings. The low overall height of the BAM product line is ideal for reducing the space required for false ceiling in any application.