

*the future of space conditioning*

## Bulkhead

## active chilled beam



# Bulkhead Active Chilled Beam

The Bulkhead Active Chilled Beam is one of Frenger's latest range of high performance Chilled Beams. Energy efficiency has been a key driver for such advancements in Frenger's Chilled Beam Technology.

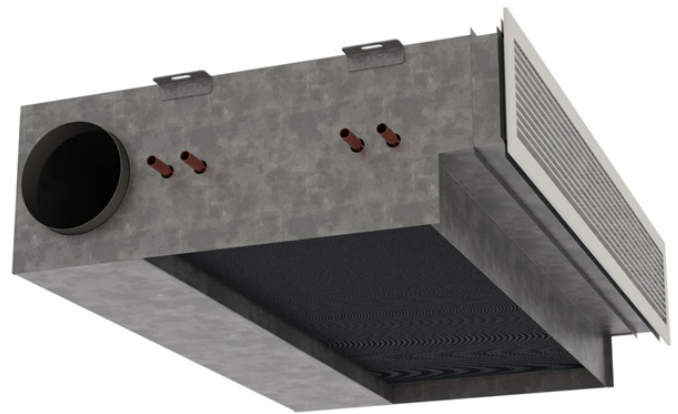
The Bulkhead beam contains a number of performance enhancing features as can be expected from the Frenger brand. The beam is designed for discreet installation into bulkheads, primarily for use in hotel bedrooms.

All induced / recirculated room air is via the return air grille which conceals the inside workings of the Active Beam, from an occupant which is resting in bed for example. The Bulkhead beam discharges its reconditioned air (which is a mixture of fresh air and recirculated air) at high level out of the top of the unit which then entrains across the ceiling (dependent upon discharge mounting height relative to ceiling) before gently dispersing and mixing with the room air.

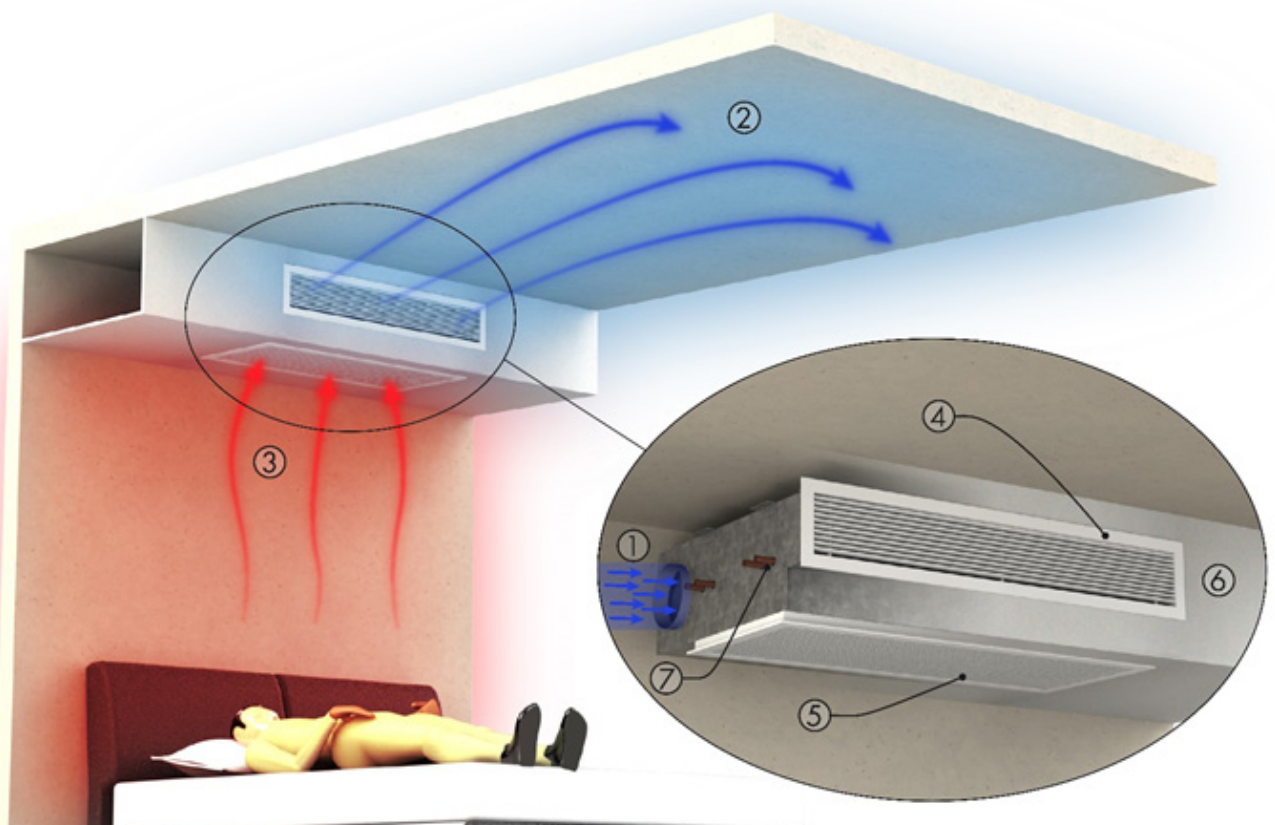
## Beam Function Principles

Fresh air is supplied to the Chilled Beam where it mixes with reconditioned room air, which is induced through the heat exchanger battery via the return air grille (supplied by installer). The reconditioned and fresh air is then introduced to the room through the air discharge grille (part of the unit supplied by Frenger), comfortably cooling or heating the room as appropriate.

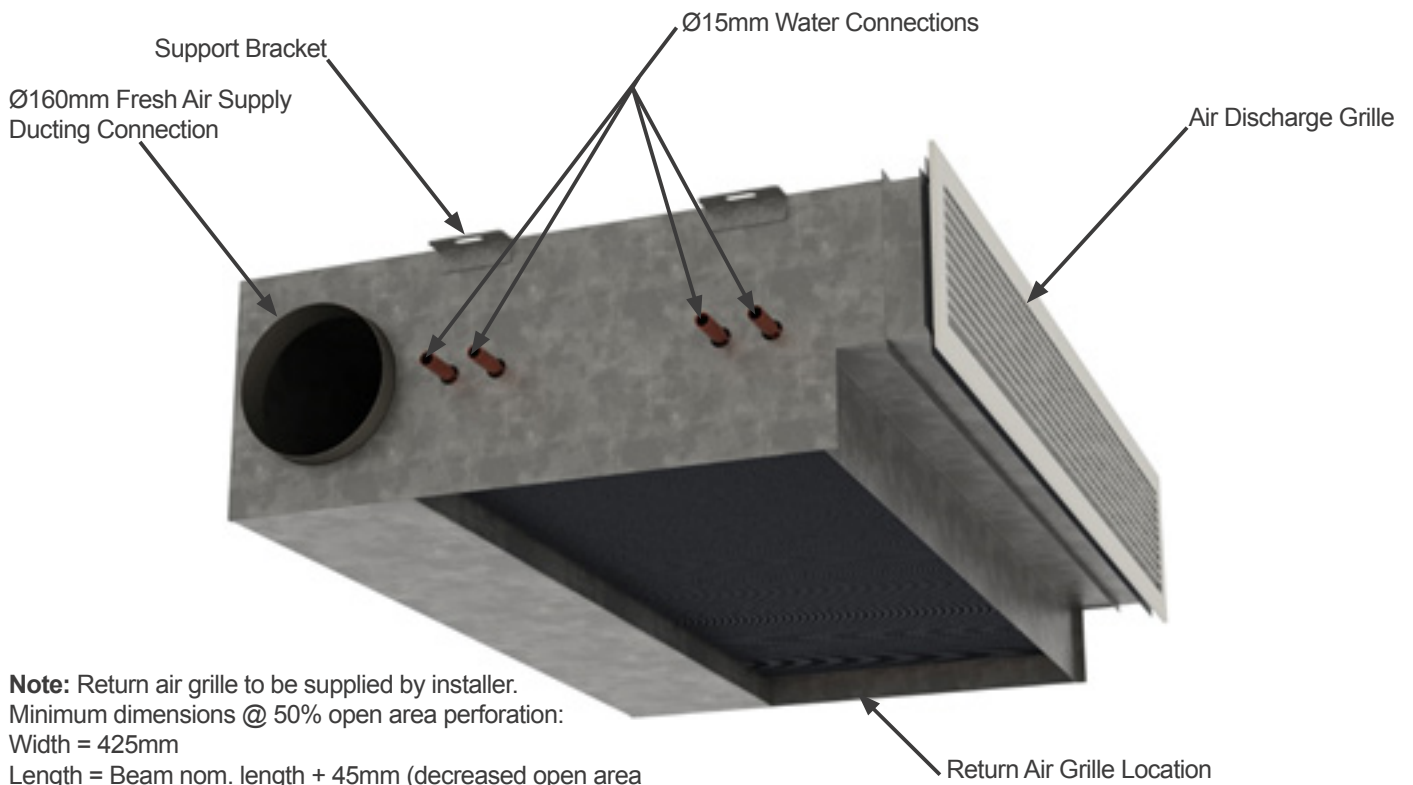
The fresh air can be supplied at a constant volume or have a turn down from 100% of design volume to 60% then 40% of design volume dependent upon room occupancy. Typical supply air pressures are within 40Pa (min) to 120Pa (max).



- (1) - Fresh Air Supply.
- (2) - Cooled Air Introduced into the Room by the Chilled Beam.
- (3) - Warm Air Induced into the Heat Exchanger Battery Via the Return Air Grille.
- (4) - Air Discharge Grille.
- (5) - Return Air Grille (supplied by installer).
- (6) - Bulkhead.
- (7) - Water Connections.

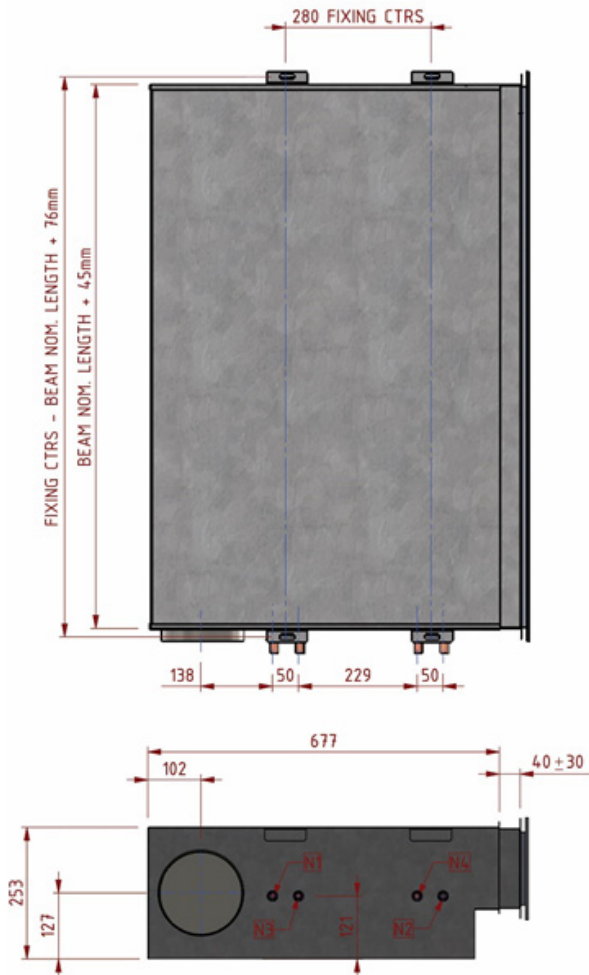


# Product Details



**Note:** Return air grille to be supplied by installer.  
 Minimum dimensions @ 50% open area perforation:  
 Width = 425mm  
 Length = Beam nom. length + 45mm (decreased open area perforation will require larger grille in order to compensate).

## Dimensions

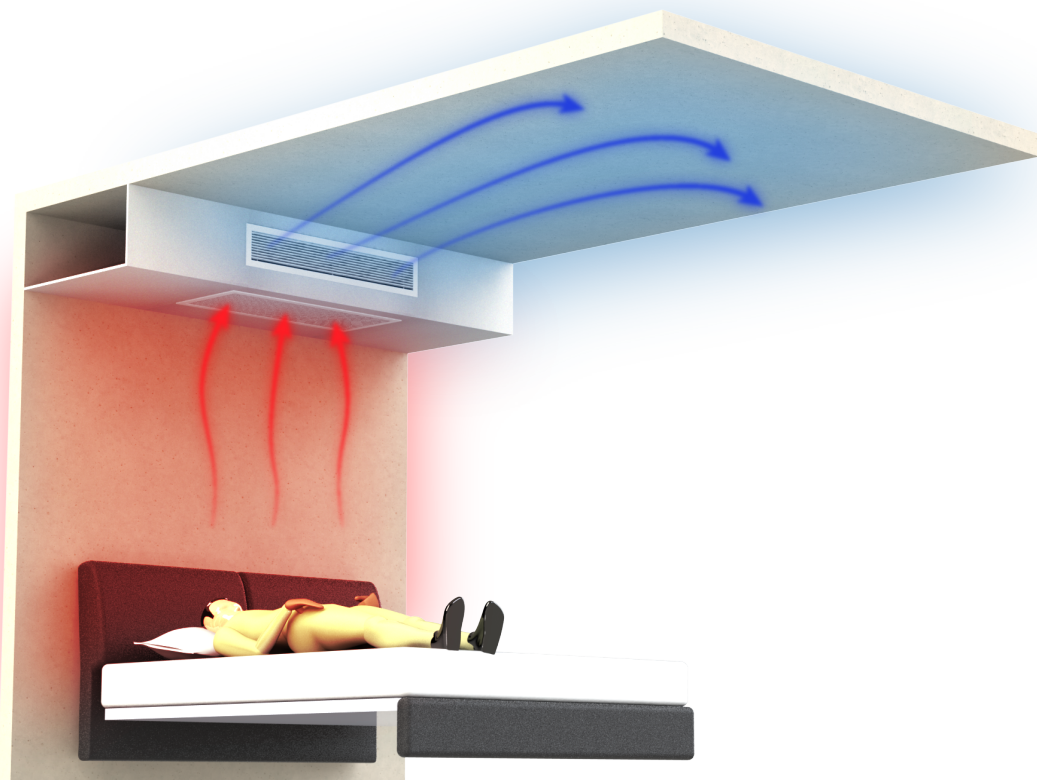
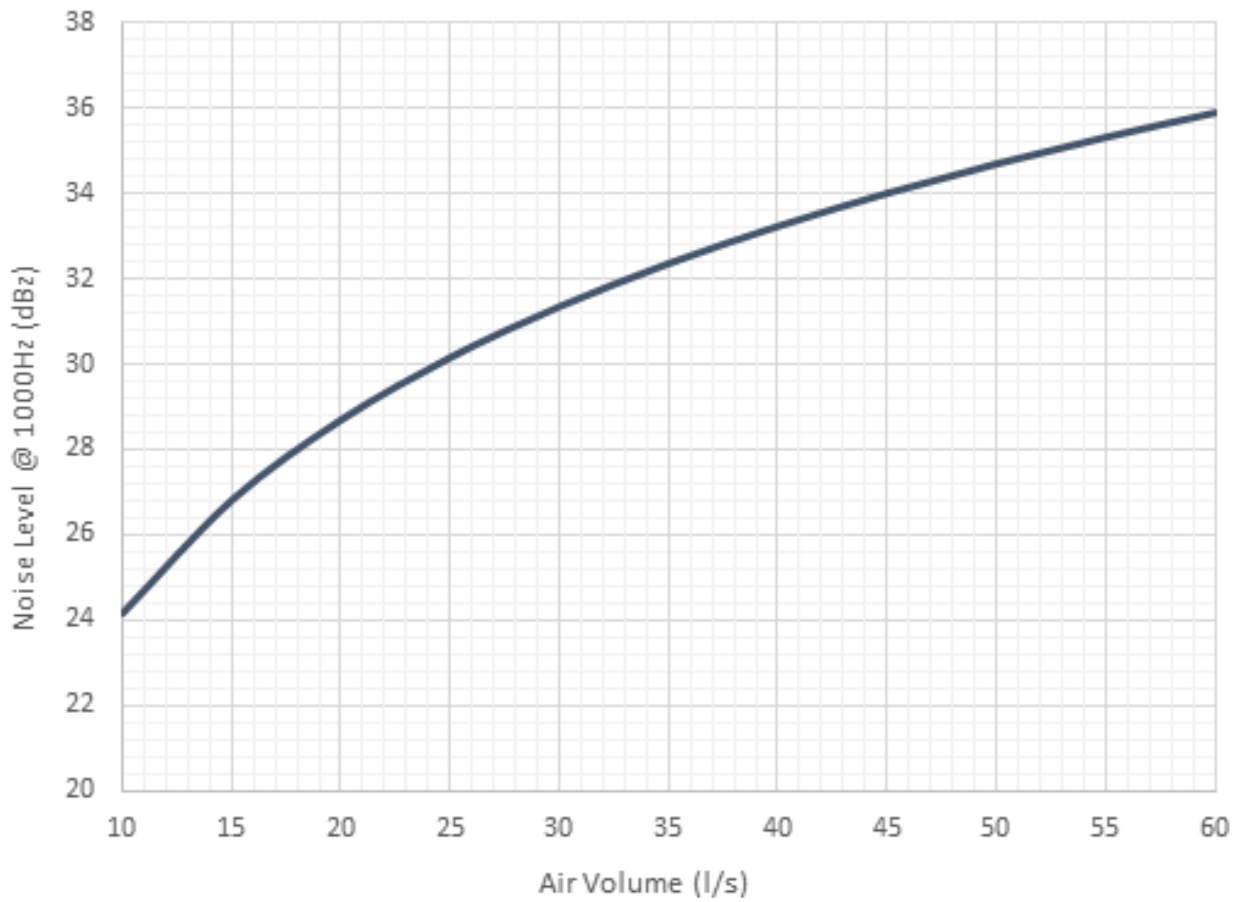


Nominal Beam Lengths: 0.9m, 1.2m, 1.8m, 2.4m, 3.0m, 3.6m.  
 (Other beam lengths available upon request)

- N1: Chilled Water Flow - 15mm Copper Pipe
- N2: Chilled Water Return - 15mm Copper Pipe
- N3: Heating Water Flow - 15mm Copper Pipe
- N4: Heating Water Return - 15mm Copper Pipe

# Noise Levels

The graph below shows the noise levels at 1000Hz (dBz) for the Bulkhead Chilled Beam at increasing air volumes (l/s):





Frenger Systems participates in the ECC programme for Chilled Beams.  
Check ongoing validity of certificate:  
[www.eurovent-certification.com](http://www.eurovent-certification.com) or  
[www.certiflash.com](http://www.certiflash.com) 

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