

PRICE PASSIVE BEAM INSTALLATION, OPERATION AND MAINTENANCE MANUAL

Date: 11/10
Reference #: L-45

Price Passive Beam – Installation Instructions

These installation instructions apply to Price passive beam models PCBL.

Identification

PCBL:

- Flat heat exchanger
- Located in a sheet metal skirt

Handling

- Avoid introducing contaminants into the unit, keep the grill face and water connection piping covered at all time during the installation process.
- Storage of the units should be in a covered, dry location while waiting for installation. Location should be cleaned of excess dust before installation.



Installation

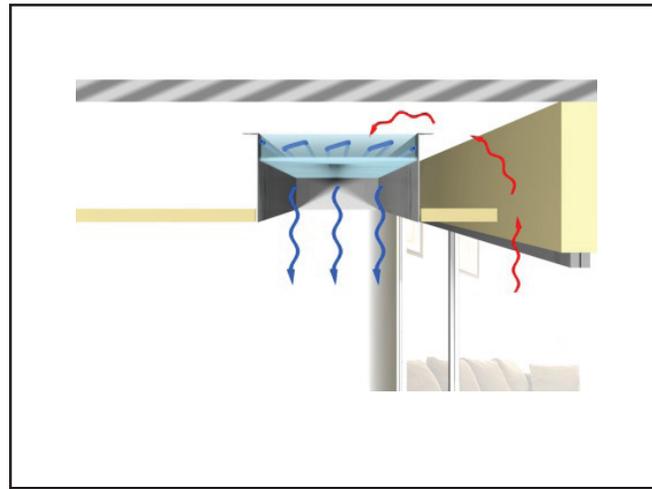
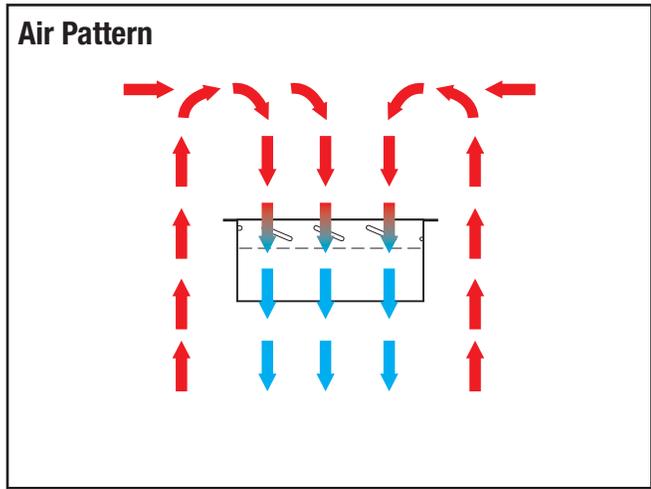
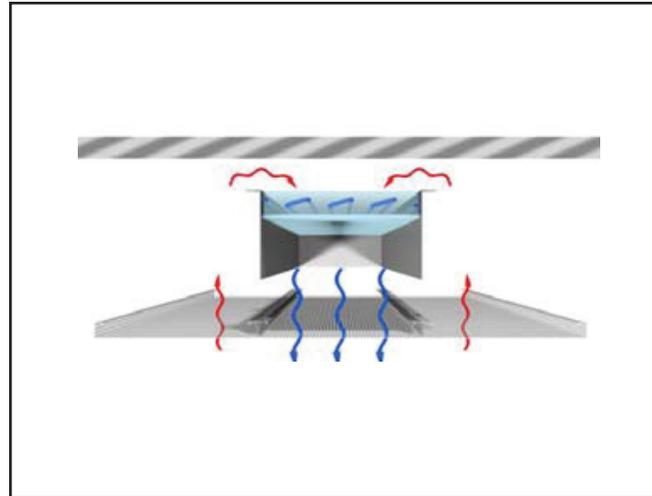
Determine where beams should be located.

The beam construction determines the beam performance. Coordinate the beam's length, width, height and face style with the required location.

As a typical room warms up, warm air will pool in the ceiling space. The passive beam will cool the air on contact of its flat heat exchanger. The cold air, having a higher density than the surrounding air, is driven back into the occupied space. The velocity of this colder air is related to the cooling capacity of the passive beam.

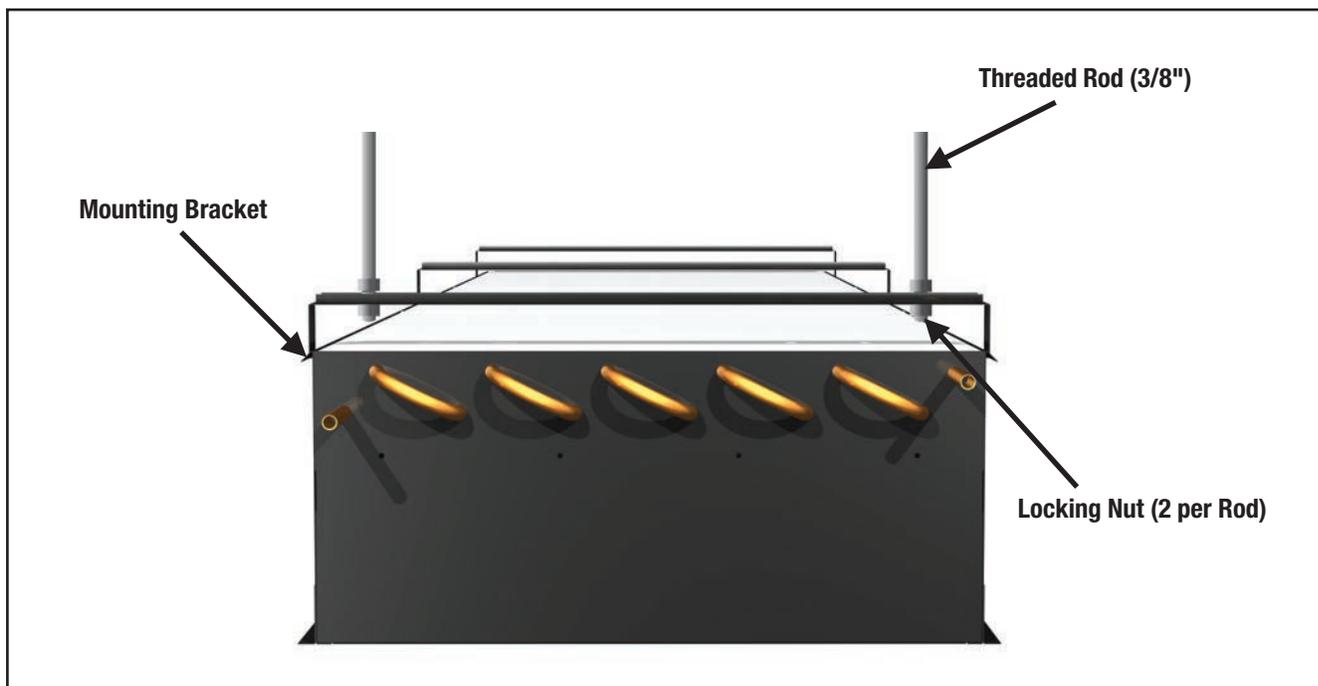
In order to guarantee optimal performance of the passive beam, there should be at least ¼ of the width above the beam for air flow. The free area around the beam should be at least half of the area of the beam face or greater.

For perimeter application, the beam should be offset from the heat source.

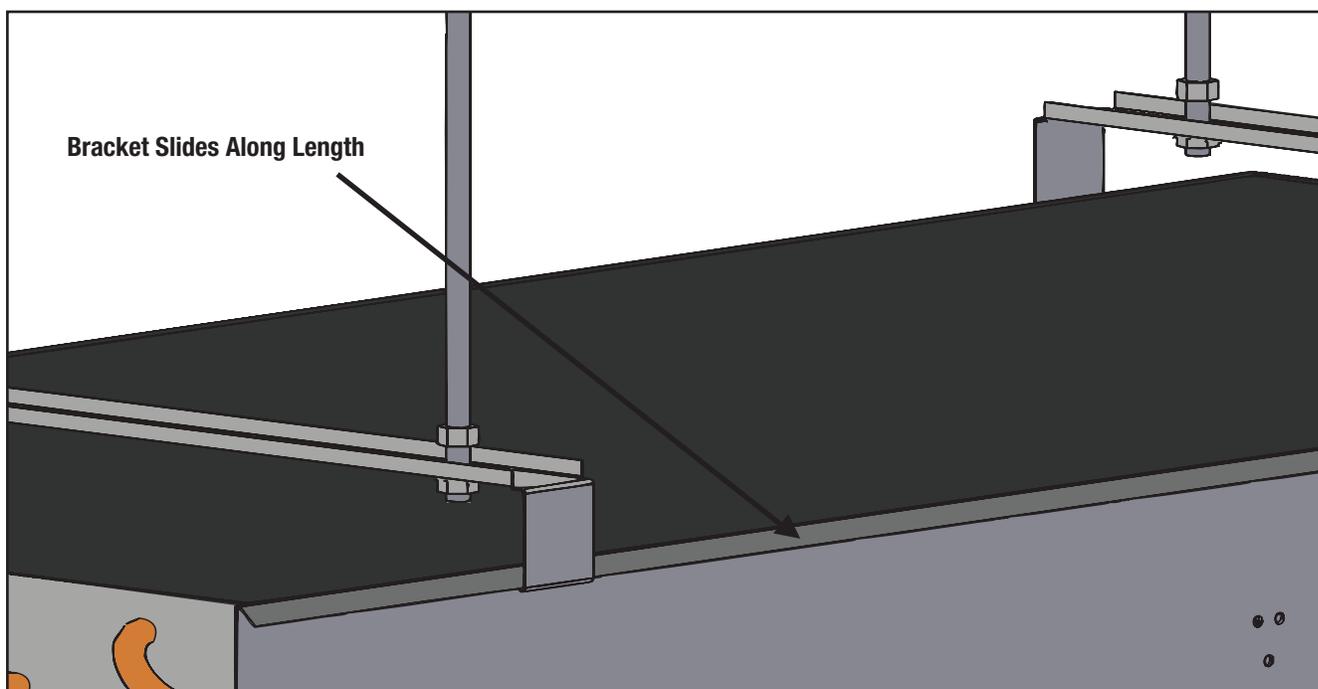


Installation Details

Locate the mounting brackets in the position required. Brackets can slide along the length of the beam to any location. With brackets positioned, tighten setting screws to set the final beam installed height. For T-bar ceiling installation, mount beam ~2" above final ceiling level. Install the ceiling then lower beam to final ceiling level.



Threaded rod can be fastened directly into the hard deck, or alternatively mounted into a secondary metal frame (Unistrut or similar) rail to allow for additional side to side adjustability.



Installation (Continued)

Water Connections

Use (2) 3/8" threaded rods per bracket to suspend to structure

Adjustable Mounting Brackets

Natural Convection Air Flow

2.500 Typ.

Optional Face (perforated or bar grille)

W + 3/16"

11.750

10

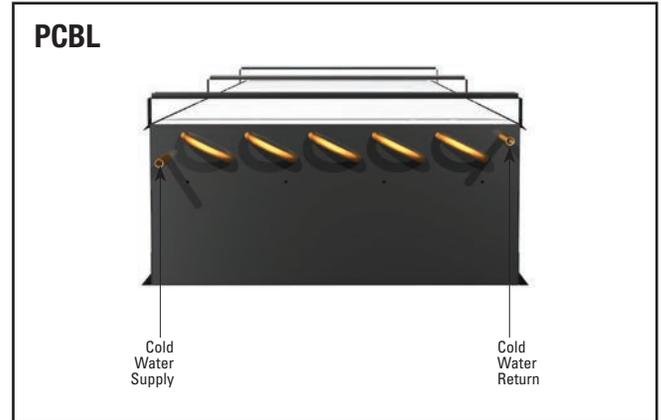
W

Nominal W	Actual W	Nominal L	Actual L
12	11.750 [298]	48	47.750 [1213]
18	17.750 [451]	60	59.750 [1518]
24	23.750 [603]	72	71.750 [1822]
		84	83.750 [2127]
		96	95.750 [2418]
		108	107.750 [2737]
		120	119.750 [3042]

* Any combination of the above width and length can be selected
 ** See submittal 248924 for available hose and valve packages
 Custom lengths on request.

Water Connections

- Recommended water connections: 1/2" sweat or FNPT.
- Before connecting beam to water system, flush and drain the water main piping to remove contaminants from the construction process.
- Pressure test the water system for leaks. Isolate and fix leaks.
- Move water through the hydronic system at or above 0.5 gpm per beam to remove air from the beams. If 0.5 gpm per beam is not normally available, shut off flow through other beams to divert more water through the beam being flushed.



Water Balancing

Manual:

- Adjust balancing valves based on scheduled values.

Pressure Independent:

- Ensure correct pressure independent valves are installed based on design drawings.

Maintenance

- Maintain good water conditions in order to avoid scale and sediment buildup in the copper tubing and other components of the hydronic system.
- Vacuum coils with a soft bristle brush as required. Typical vacuum cycles are 1-5 years, depending on room cleanliness and installed conditions.
- If included in the system design, check dew point sensor(s) or humidity sensor(s) according to sensor manufacturer's methods and schedule.





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