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ACTIVE CHILLED BEAM LINEAR

PRODUCT OVERVIEW

Before You Start
Inspect all cartons and boxes for flaws and shipping damage. If shipping damage has occurred, take photos and contact the shipping company to file a freight claim immediately. Ensure all tools (as listed on the following page) are on site and ready for use. A minimum of two (2) people are required for safe installation.

ACBL:
- 1 or 2 way discharge units
- Horizontal Coil
- 12 or 24 inch width
- 24 to 120 inch length

Handling
- Avoid introducing contaminants into the unit; such as dust or dirt. Keep the induction grille face, the duct inlet, and the water connection piping covered at all times during the installation process.
- To avoid smudging the unit while handling, the use of clean white cotton gloves is recommended.
- Storage of the units should be in a covered, dry location while waiting for installation. Location should be cleaned of excess dust before installation.

Typical Installation in Suspended Ceilings
Determine where beams should be located using building drawings and identification tags on schedule and units. Ensure the beam's length, width, nozzle size, number of pipe connections, pipe circuiting, duct size, duct inlet location and air discharge configuration (1 way or 2 way) match the requirements specified for that particular beam by cross referencing the Price provided schedule, the order linestring and line instructions with the units that are on site.

Maintenance
Maintenance required is accessing the coil from the room side through the hinged face and vacuuming the water coil with a soft bristle brush, as well as wiping the slot with a damp cloth based on space and owner requirements.
Maintain water conditions which prevent corrosion of copper tubing and ensure that safeguards against air accumulation through leaks or oxygen diffusion in system piping are functioning.
If included in the system design, check the condensate sensor(s) or humidity sensor(s) according to sensor manufacturer's methods and schedule.
ACTIVE CHILLED BEAM LINEAR

PRODUCT OVERVIEW

Required Tools/Parts

To be supplied by contractor

- (2+) Ladders or scaffolding
- Laser level
- Cordless drill/impact
- Damp cloth(s) (for cleaning)
- Tape measure
- Clamps/Locking plier
- Suspension methods
  - Pre-stressed 12 ga. suspension wire (or approved alternative) with necessary equipment to install wire into substructure.
  - Hang wire
  - 3/8 in. Threaded rod, 3/8 in. suspension nuts
  - Adjustable hanging wires
  - Speed rail (if applicable)
- Philips screw driver (DIN rail mounting option only)

Dimensional Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Nominal Width</th>
<th>Actual Width</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACBL24</td>
<td>24&quot;</td>
<td>23.75</td>
<td>28.75</td>
</tr>
<tr>
<td></td>
<td>36&quot;</td>
<td>35.75</td>
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<tr>
<td></td>
<td>120&quot;</td>
<td>119.75</td>
<td>53.95</td>
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</tbody>
</table>

Dimensional Data (continued)

ACBL24 Adjustable Mounting Bracket

ACBL24 Fixed Mounting Bracket
ACTIVE CHILLED BEAM LINEAR

PRODUCT OVERVIEW

ACBL12

WATER COIL CONNECTIONS

INTEGRATED 1/4" (6) PRESSURE PORT (BALANCING/COMMISSIONING)

ADJUSTABLE MOUNTING BRACKETS SECURED BY #10-24 SCREWS (SCREWS PROVIDED BY OTHERS)

DOOR CAN HINGE BOTH SIDES (REMOVABLE)

HINGED FACE (PERFORATED OR GRILLE)

11 3/16" ± 1" MOUNTING BRACKET SPAN

1 1/16" ± 1/4"

ACTIVE COIL LENGTH (L)

<table>
<thead>
<tr>
<th>NOMINAL SIZE</th>
<th>ACTUAL WIDTH (W)</th>
<th>WEIGHT (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIDTH 12</td>
<td>11.750</td>
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</tr>
<tr>
<td>LENGTH 24</td>
<td>23.750</td>
<td>17 18</td>
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<tr>
<td>LENGTH 36</td>
<td>33.750</td>
<td>26 29</td>
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<tr>
<td>LENGTH 48</td>
<td>47.750</td>
<td>35 39</td>
</tr>
<tr>
<td>LENGTH 60</td>
<td>59.750</td>
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<tr>
<td>LENGTH 72</td>
<td>71.750</td>
<td>52 58</td>
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<tr>
<td>LENGTH 84</td>
<td>83.750</td>
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<tr>
<td>LENGTH 96</td>
<td>95.750</td>
<td>69 77</td>
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<tr>
<td>LENGTH 108</td>
<td>107.750</td>
<td>78 87</td>
</tr>
<tr>
<td>LENGTH 120</td>
<td>119.750</td>
<td>86 96</td>
</tr>
</tbody>
</table>

WEIGHT (lbs)

<table>
<thead>
<tr>
<th>NOMINAL BEAM LENGTH</th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>3.000</td>
<td>1.000</td>
</tr>
<tr>
<td>36</td>
<td>6.000</td>
<td>1.000</td>
</tr>
<tr>
<td>48</td>
<td>12.000</td>
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<td>84</td>
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<td>4.250</td>
</tr>
<tr>
<td>120</td>
<td>48.000</td>
<td>4.250</td>
</tr>
</tbody>
</table>
Unit Installation (Ceiling Grid)

**Step 1:** Determine beam locations and orientation according to approved reflected ceiling plans.

**Step 2:** Install adjustable hanging wire, Speed Rail, threaded rod and/or hanger to support all four corners of the beam as well as two middle supports (7 ft. - 10 ft. only)

**Step 3:** Orient beam according to reflected ceiling plan.

**Step 4:** Install 3/8 in. suspension nut on threaded rod.

**Step 5:** Slide beam mounting bracket over 3/8 in. threaded rod and attached 3/8 in. suspension nut.

**Step 6:** Level beams ~2 in. above the finished ceiling height for drop ceiling installations, at ceiling level for exposed beams, using laser level.

**Step 7:** Once ceiling is installed, lower beams onto grid and tighten the two suspension nuts to hold the beams tight in place.

**Step 8:** Connect the water supply and return piping to the beam coil. Hard pipe connections or flexible hose can be used (See Page 9).

**Step 9:** Connect the supply air to the ACBL inlet collar. The air connection can be made with either hard duct or flex duct. Ensure an air tight connection to achieve desired performance (See Page 9).

**NOTE:** Installation of chilled beams to substructure should be done in accordance with local codes. Additional seismic bracing might be required.
**ACTIVE CHILLED BEAM LINEAR**

**INSTALLATION & MOUNTING INSTRUCTIONS**

**Slimline Parts List**

**Quantity of parts per beam:**

A. (1) TEK Screw  
B. (2) #10-32 Bolt  
C. (3) Slimline Bracket (pre-installed)

**Slimline Installation Instructions for ACBL24**

1. Hang and level each beam separately.  
2. Align beams so that the faces are on the same plane.  
3. Connect beams together using (2) Slimline Brackets, (4) TEK screws, and (4) #10-32 bolts.
**ACTIVE CHILLED BEAM LINEAR**

**INSTALLATION & MOUNTING INSTRUCTIONS**

**Slimline-Wings Parts List**

**Quantity of parts per beam:**

A. (4) TEK Screw  
B. (16) #10-32 Bolt  
C. (2) Slimline Bracket (pre-installed)  
D. (2) Slimline-Wing Alignment Bracket  
E. (2) Wing Endcap
**ACTIVE CHILLED BEAM LINEAR**

**INSTALLATION & MOUNTING INSTRUCTIONS**

**Slimline-Wings Installation for ACBL24**

1. Hang and level each beam separately
2. Align beams so that the faces are on the same plane and properly aligned
3. With the wings in the vertical position, loosen screws to lower wings (1). (Fig. 1)
4. Tighten screws in down position.
5. Install self-drilling (TEK screws) & #10-32 onto Slim-Line Bracket (Fig. 2)
6. Install Slim-Line Wing Alignment bracket with #10-32 screws (Fig. 3)
7. Install wing endcaps with #10-32 screws (Fig. 4)
8. Finished. (Fig. 5)
ACTIVE CHILLED BEAM LINEAR

INSTALLATION & MOUNTING INSTRUCTIONS

Water System Preparation
- Water connection options:
  - Sweat, Threaded, Push Connect.
- Before connecting beams to the 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.

Water Balancing - Manual
- Adjust balancing valves based on fluid flow rates scheduled on Price performance data.

Water Balancing - Auto/Pressure Independent
- Ensure correct pressure independent valves are installed based on design drawings. Confirm the correct flow rate is on the correct branch. (i.e. hot waterflow rate going through hot water coil.)

Air System Preparation
- Ensure an air tight connection between the supply duct and the active beam. Duct connections are recommended to meet SMACNA class B standard up to 2 in.w.g.
- Air connections will ideally have straight duct sections upstream of the air inlet. Although bends in the duct are permitted close to the air inlet, there should be 3 duct diameters straight leading into inlet to ensure laminar flow. Only straight ductwork connections will yield a reliable pressure port measurement.

Air Balancing
- Measure static pressure in the plenum of the active beam by connecting a static pressure measurement device to the port included on the beam. The pressure port is located inside the discharge slot, near the end of the beam.
- Adjust balancing damper to match the Price project schedule static pressure to the measured result.
- Damper should be used for trimming only.
- Contact the Price Application Engineering department for high altitude locations.
- See Air flow calibration charts on pg 12.

NOTE: Traversing the duct work before a beam will not guarantee that the beam is properly balanced because performance is based on internal plenum pressure.
**Damper Installation**

Select the appropriate MQ/VAV Damper required for the location based on the diameter of the unit or zone duct.

The MQ/VAV damper should always be installed in locations that are accessible for inspection and removal if necessary.

In order to avoid additional noise in the occupied space:

1. The MQ/VAV damper should be installed at least 5 duct diameters upstream of the active beam.
2. The MQ/VAV damper should be used as a trimming damper and not a balancing damper.
ACTIVE CHILLED BEAM LINEAR

INSTALLATION & MOUNTING INSTRUCTIONS

Interpretation of Beam Tag

All beams come shipped with a tag on the outside of their plastic wrapping. This tag should be checked to ensure that the beam is placed in the proper location, and contains the correct options.

<table>
<thead>
<tr>
<th>1</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Discharge (2W: 2-Way, 1W: 1-Way)</td>
</tr>
<tr>
<td>3</td>
<td>Width (in.)</td>
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<tr>
<td>4</td>
<td>Overall Length (in.)</td>
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<tr>
<td>5</td>
<td>Coil Length (in.)</td>
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<tr>
<td>6</td>
<td>Nozzle Style</td>
</tr>
<tr>
<td>7</td>
<td>Coil Type</td>
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<tr>
<td>8</td>
<td>Coil Connection</td>
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<tr>
<td>9</td>
<td>Coil Orientation</td>
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<tr>
<td>10</td>
<td>Inlet Size</td>
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<tr>
<td>11</td>
<td>Inlet Location</td>
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<tr>
<td>12</td>
<td>Inlet Damper Type</td>
</tr>
<tr>
<td>13</td>
<td>Face Style (P: Perforated, G: Grille)</td>
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<tr>
<td>14</td>
<td>Plenum Finish</td>
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<tr>
<td>15</td>
<td>Mounting Bracket Type</td>
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<td>17</td>
<td>Accessory Blank Section</td>
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<tr>
<td>18</td>
<td>Return Exhaust Section</td>
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<td>Air Diffuser Section</td>
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<tr>
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<tr>
<td>21</td>
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<td>23</td>
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</table>

Contact information

For all chilled beam issues please contact:
beamteam@priceindustries.com or
by phone at 204-654-5613 ext. 3
**ACTIVE CHILLED BEAM LINEAR**

**INSTALLATION & MOUNTING INSTRUCTIONS**

**Airflow Calibration Charts: ACBL12 - 1way**

Data presented for Standard Atmosphere at sea level.

![Airflow Calibration Chart for 1-way ACBL](image)

**Airflow Calibration Charts: ACBL12 - 2way**

Data presented for Standard Atmosphere at sea level.

![Airflow Calibration Chart for 2-way ACBL](image)
ACTIVE CHILLED BEAM LINEAR

INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Charts: ACBL24 - 1way
Data presented for Standard Atmosphere at sea level.

2 ft.

3 ft.

4 ft.

5 ft.

6 ft.

7 ft.
Airflow Calibration Charts: ACBL24 - 1way
Data presented for Standard Atmosphere at sea level.
ACTIVE CHILLED BEAM LINEAR

INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Charts: ACBL24 - 2way

Data presented for Standard Atmosphere at sea level.

2 ft.

3 ft.

4 ft.

5 ft.

6 ft.

7 ft.

Airflow Calibration Charts: ACBL24 - 2way

Data presented for Standard Atmosphere at sea level.
ACTIVE CHILLED BEAM LINEAR

INSTALLATION & MOUNTING INSTRUCTIONS

Airflow Calibration Charts: ACBL24 - 2way
Data presented for Standard Atmosphere at sea level.

8 ft.

9 ft.

10 ft.