**ACBL**

**ACTIVE CHILLED BEAM LINEAR**

The ACBL is designed to provide a high cooling and heating output while simultaneously supplying fresh air to the occupied area. A mix of fresh air and conditioned room air is distributed to the room through one or two slots integrated to the beam. Sensible cooling and heating is achieved through the supply of fresh, conditioned air from the building ventilation system as well as the conditioning of room air induced through the beam’s hydronic coil.

**DESIGNED TO MINIMIZE ENERGY**

+ Designed to provide high cooling and heating capacities through induction.
+ Using more water and less air, energy consumption is reduced to achieve the same heating or cooling capacity as traditional HVAC system.
+ Less air leads to low noise output and smaller ductwork upstream of the beam.

**RIGOROUSLY TESTED FOR PERFORMANCE AND COMFORT**

+ Tested in accordance with ASHRAE 200.
+ Utilization of fully automated Hydronic Test Chamber to confirm product use in various applications.

**AESTHETIC OPTIONS**

The ACBL is available in 12 in. or 24 in. width and lengths ranging from 24 in. to 120 in. in increments of 12 in. with a variety of aesthetic options to accommodate architectural requirements.

- **Perforated Face** – Greater than 50% free area facilitates the induction process.
- **Grille Face** – Provides linear aesthetics for alternate styling options.
- **T-bar ceiling grid** – Standard or Regular compatibility.

**TYPICAL APPLICATIONS**

The ACBL is Price Industries’ most versatile beam. With the option of either 1-way or 2-way throw patterns and pattern controllers to guide the discharged air, the ACBL can be utilized in room centers, perimeters or both to provide optimum thermal comfort.

**FEATURES**

+ Tested in accordance with ASHRAE 200
+ Lower energy use per Btu/h of heat transfer
+ Small footprint allows more usable ceiling space
+ Low maintenance

For more information visit www.priceindustries.com
**Wings (WNG6)**
When beams are installed in an open ceiling, wings ensure a horizontal air pattern and hide services such as plumbing, power, and ductwork.

**Integrated Return (RET)**
The integrated return allows for a ducted or plenum style return, and places it in the most optimal location. This also provides a continuous linear aesthetic.

**Color Options**
In addition to the standard white option (B12), the exterior can be ordered in a variety of special (SPl) paint finishes. The coil can be unpainted or black (BLK).

**Integrated Diffuser (ADS)**
The integrated diffuser includes a separate air inlet that can be combined with a manual or VAV damper. When more airflow is required, an integrated diffuser can be used to adjust the airflow to the zone.

**Valve & Controls Enclosure (ABS)**
The enclosure section allows for room side access to the plumbing, valves, and electronic controls to simplify maintenance.

**Plenum Finish Options**
The plenum is not visible from the room side, but finishes may still be selected. Plenum comes in a standard galvanneal finish (GLV), or can be painted to match (MATCH) the exterior of the beam typical of open ceiling applications where the plenum can be seen.

**Pattern Controllers (PC)**
Pattern controllers govern the direction of the discharge air and can be used to shorten throw by up to 50% and help reduce any drafts felt by the occupants. This option is only available on the 24 in. model.

**Slimline Coupling (SLIM)**
The slimline coupling option allows multiple beams to be connected in series so that they appear as a single, continuous unit.

**ACBL OPTIONS**
Linestrings shown in brackets.

**Plenum Finish Options**
- The plenum is not visible from the room side, but finishes may still be selected.
  - Plenum comes in a standard galvanneal finish (GLV), or can be painted to match (MATCH) the exterior of the beam.

**Integrated Return (RET)**
- The integrated return allows for a ducted or plenum style return, and places it in the most optimal location.

**Color Options**
- In addition to the standard white option (B12), the exterior can be ordered in a variety of special (SPl) paint finishes.
  - The coil can be unpainted or black (BLK).

**Integrated Diffuser (ADS)**
- The integrated diffuser includes a separate air inlet that can be combined with a manual or VAV damper.
  - When more airflow is required, an integrated diffuser can be used to adjust the airflow to the zone.

**Valve & Controls Enclosure (ABS)**
- The enclosure section allows for room side access to the plumbing, valves, and electronic controls.

**Pattern Controllers (PC)**
- Pattern controllers govern the direction of the discharge air and can be used to shorten throw by up to 50%.
  - Helpful in reducing drafts felt by the occupants.
  - Available on the 24 in. model.

**Slimline Coupling (SLIM)**
- Allows multiple beams to be connected in series for a continuous look.

**Plenum Finish Options**
- The plenum is not visible from the room side but finishes may still be selected.
- Options include:
  - Standard galvanneal finish (GLV)
  - Painted finishes to match the exterior (MATCH)

**Integrated Return (RET)**
- The integrated return offers a ducted or plenum style return with optimal placement.

**Color Options**
- Standard white option (B12) with additional special (SPl) paint finishes available.
- Options include unpainted or black (BLK) variants.

**Integrated Diffuser (ADS)**
- Includes a separate air inlet that combines with manual or VAV dampers for adjustable airflow.

**Valve & Controls Enclosure (ABS)**
- Allows room side access to plumbing, valves, and electronic controls for maintenance.

**Pattern Controllers (PC)**
- Control discharge air direction, reducing throw by up to 50%.
  - Only available on the 24 in. model.

**Slimline Coupling (SLIM)**
- Multiple beams can be connected in series, appearing as a single, continuous unit.
Water Coil Options

The ACBL is available with two water coil configurations.

2 Pipe Configuration – Can be used in heating or cooling applications.

4 Pipe Configuration – Includes a dedicated heating circuit.

Damper Options

Three damper options allow for fine tuning of static pressure.

Volume Flow Regulator (VFR) – Maintains constant static pressure over a range of airflow rates.

Manual Quadrant (MQ) Damper – For onsite fine tuning.

VAV Damper – Can be electronically actuated for VAV applications.

Applications

Office Buildings

- Typically installed in open office areas, private offices, conference rooms, hallways, and storage rooms.
- Can be utilized in both interior and perimeter zones.
- The slimline configuration allows for a row of beams to be installed adjacently without interruption in open office areas.

Healthcare

- Typically installed in patient rooms and administrative areas.
- Small footprint of the beams and ductwork can lead to additional usable space.

Laboratories

- Beams are typically applied in load driven labs.
- The air diffuser (ADS) option can be utilized in lab spaces to provide demand control ventilation as well as makeup air during occupied hours.
- The pattern controller (PC) option can be used to spread the air in small footprint layouts.

K12 Schools

- Multiple space uses available including libraries, classrooms, offices, and labs.

Post Secondary

- Multiple space uses available including libraries, classrooms, offices, lecture hall, and labs.
- Excellent waterside efficiency opportunity by utilizing the district loop from the central plant to supply the water to the beams.

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DIMENSIONAL DATA

24 in. Active Chilled Beam Linear

12 in. Active Chilled Beam Linear

PERFORMANCE RANGE

<table>
<thead>
<tr>
<th>Performance</th>
<th>24 in. ACBL 2-Way Discharge</th>
<th>24 in. ACBL 1-Way Discharge</th>
<th>12 in. ACBL 2-Way Discharge</th>
<th>12 in. ACBL 1-Way Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sensible Cooling (Btu/h per Active Lineal Foot)</td>
<td>300 to 1,600</td>
<td>400 to 1,300</td>
<td>300 to 1,100</td>
<td>200 to 650</td>
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<tr>
<td>Total Sensible Heating (Btu/h per Active Lineal Foot)</td>
<td>500 to 2,000</td>
<td>550 to 1,750</td>
<td>360 to 650</td>
<td>350 to 800</td>
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<tr>
<td>Sound Level</td>
<td>NC &lt; 15 to 35</td>
<td>NC &lt; 15 to 35</td>
<td>NC &lt; 15 to 35</td>
<td>NC &lt; 15 to 35</td>
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</tbody>
</table>

DESIGN PARAMETERS

<table>
<thead>
<tr>
<th>Design Parameters</th>
<th>Cooling</th>
<th>Heating</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>55 – 65°F</td>
<td>60 – 90°F</td>
</tr>
<tr>
<td>Airflow Rate</td>
<td>3 – 25 cfm/ft. (2-Way Discharge)</td>
<td>3 – 15 cfm/ft. (1-Way Discharge)</td>
</tr>
<tr>
<td>Dew Point</td>
<td>2°F</td>
<td>92 – 140°F</td>
</tr>
<tr>
<td>Water AT</td>
<td>2 – 6°F</td>
<td>10 – 20°F</td>
</tr>
<tr>
<td>Water Flow Rate</td>
<td>min 0.5 gpm, max 3 gpm (Optimal ≥ 1 gpm)</td>
<td></td>
</tr>
<tr>
<td>Water ΔP</td>
<td>0 – 10 ft.</td>
<td></td>
</tr>
<tr>
<td>Air ΔP</td>
<td>0 – 0.8 in. (Target 0.4 – 0.6 in.)</td>
<td></td>
</tr>
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