ACBL24

LINEAR ACTIVE CHILLED BEAM 24 IN.

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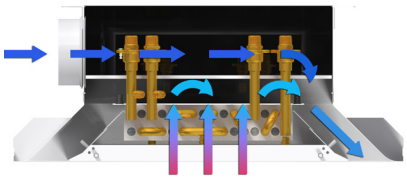
ACBL24
Linear Active Chilled Beam 24 in.

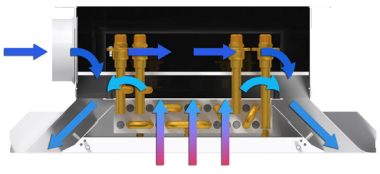
The Linear Active Chilled Beam (ACBL) is Price Industries' most versatile beam. With the option of either 1-way or 2-way throw patterns and pattern controllers to guide the discharged air (only on 24 in. wide unit), the ACBL can be utilized in room centers, perimeters or both to provide optimum thermal comfort. The ACBL is designed to provide a high cooling and heating output by conditioning the room air induced through the beams hydronic coil while simultaneously supplying fresh, conditioned air to the occupied area.

24 in. width

610mm width



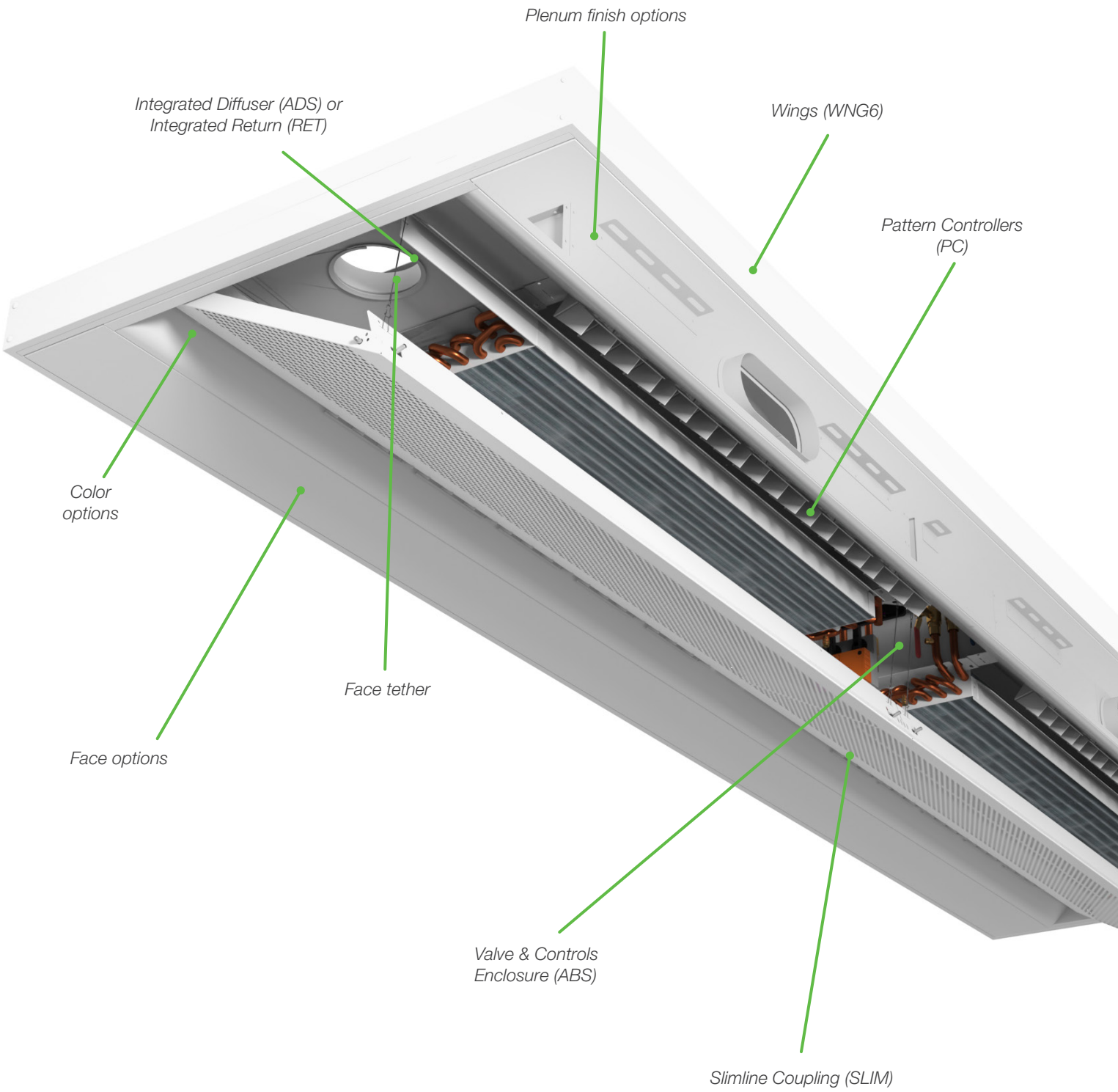
1-Way airflow



2-Way airflow

ACBL OPTIONS

Linestrings shown in brackets.



OPTION DETAILS

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

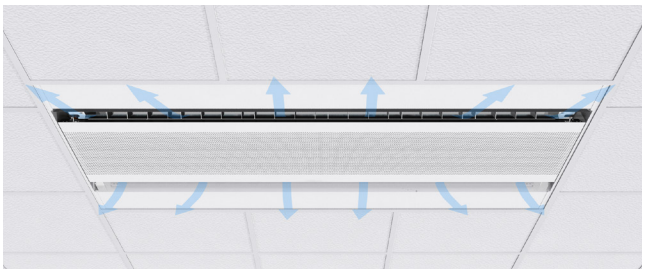
The plenum is not visible from the room side, but finishes may still be selected. Plenum comes in a standard galvanneal finish (GLV), or can be painted to match (MATCH) the exterior of the beam typical of open ceiling applications where the plenum can be seen.

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.

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.

Face Options

Perforated Face - Greater than 50% free area facilitates the induction process.

Grille Face - Provides linear aesthetics for alternate styling options.

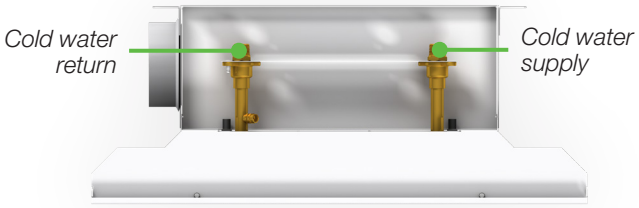
T-bar ceiling grid - Standard or Tegular compatibility.

WATER COIL OPTIONS

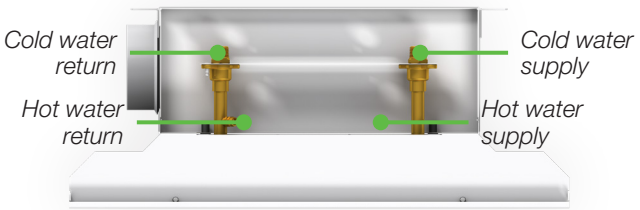
The ACBL is available with two water coil configurations.

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

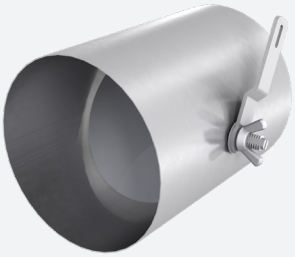
4-Pipe Configuration – Includes dedicated circuits for heating and cooling.



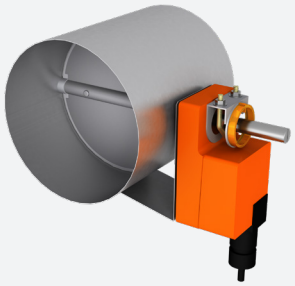
2-Pipe ACBL 24 in.



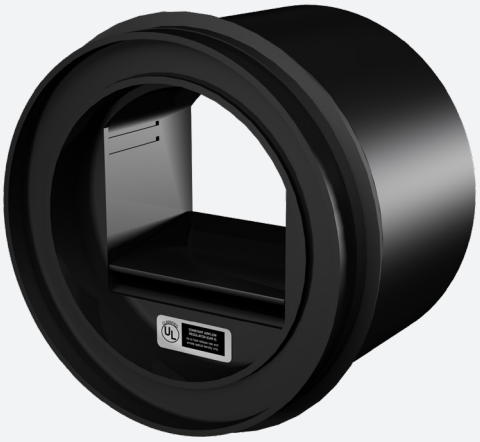
4-Pipe ACBL 24 in.



Manual Quadrant Damper



VAV Damper



Volume Flow Regulator

DAMPER OPTIONS

Three damper options allow for fine tuning of static pressure.

Volume Flow Regulator (VFR) – System powered pressure independent airflow regulator.

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

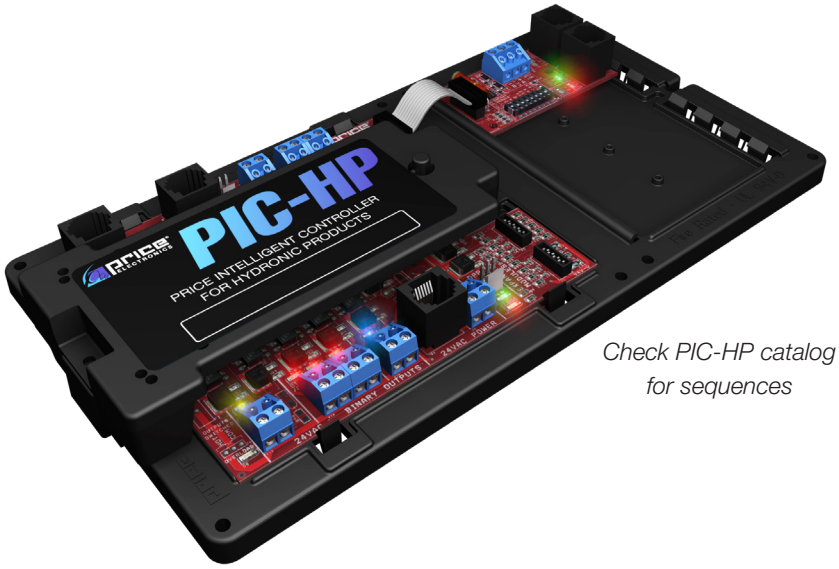
+ Multiple space uses available including libraries, classrooms, offices, and labs.

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.

ZONE CONTROLLER

With the Price Intelligent Controller for Hydronic Applications (PIC-HP), Price now offers control of both the air side and the water side at the zone level. A wide variety of standard sequences are available depending on the desired control method. This systems brings multiple control points into one location allowing substantial cost savings with Chilled Beams systems. These controls are available with BMS integration over BACnet.



Check PIC-HP catalog for sequences

PIC-HP Control Sequences

Airflow Control Strategy

- \+ DCV
- \+ No airflow control
- \+ Min/Max
- \+ Constant Volume
- \+ VAV

Water Systems

- \+ 2-Pipe
- \+ 4-Pipe
- \+ Temperature Reset Module (TRM)

Water Control Methods

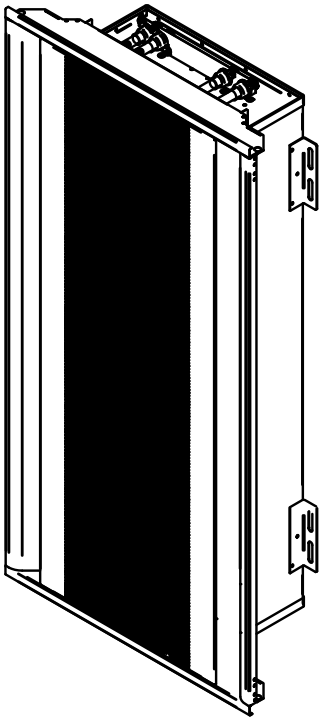
- \+ Binary
- \+ Modulating

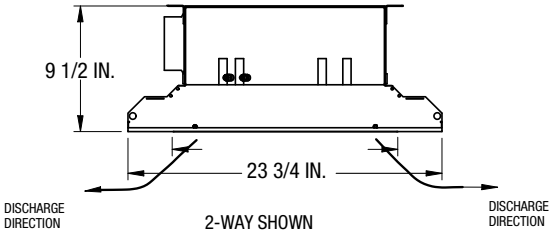
Cooling and/or Heating

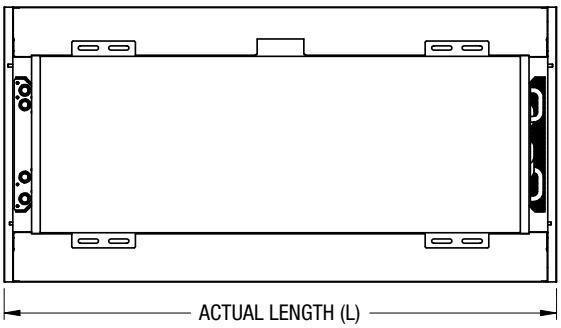
- \+ Cooling
- \+ Heating
- \+ Both

DIMENSIONAL DATA

24 in. Linear Active Chilled Beam







Nominal Width (mm)	Actual Width (W)
610	603.25
Nominal Length (mm)	**Actual Length (L)**
610	603.25
914	908.05
1219	1212.85
1524	1517.65
1829	1822.45
2134	2127.25
2438	2432.05
2743	2736.85
3048	3041.65

Note: All metric conversions are hard converted.

PERFORMANCE DATA

Performance Range

Performance	ACBL24 2-Way Discharge	ACBL24 1-Way Discharge
Total Sensible Cooling (Watts per Active Lineal Meter)	290 to 1540	380 to 1250
Total Sensible Heating (Watts per Active Lineal Meter)	480 to 1920	530 to 1680
Sound Level	NC < 15 to 35	NC < 15 to 35

Design Parameters

Design Parameters	Cooling	Heating
SAT	12.8 - 18.3°C	15.6 - 32.2°C
Airflow Rate	4.6 - 38.7 l/s/m (2-Way Discharge) 4.6 - 23.2 l/s/m (1-Way Discharge)	
EWT	Dew point + 1.1°C	32.2 - 60.0°C
Water ΔT	1.1 - 3.3°C	5.6 - 11.1°C
Water Flow Rate	**min**: 0.032 l/s **max**: 0.189 l/s (Optimal ≥ 0.063 l/s)	
Water ΔP	0 - 30 kPa	
Air ΔP	49.8 - 199.1 Pa (Target 99.5 - 149.3 Pa)	

Note: All metric conversions are hard converted.

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