

LCT

HIGH CAPACITY HEATING/COOLING TERMINAL



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The High Capacity Heating/Cooling Terminal (LCT) is a perimeter linear terminal with an integrated heating and cooling water coil designed for raised floor applications. Using the LCT allows for conditioning of the perimeter zone without the use of an underfloor fan terminal.

The LCT provides heating and cooling by utilizing forced air through an air damper from a pressurized plenum. The damper located on the LCT can modulate heating and cooling demands to the perimeter zone based on need. A separate heavy-duty linear floor grille can be fitted to these units to provide a seamless look within the space. The integrated hydronic coils provide decoupled heating/cooling at the perimeter, reducing perimeter zone dependence on temperature reset.

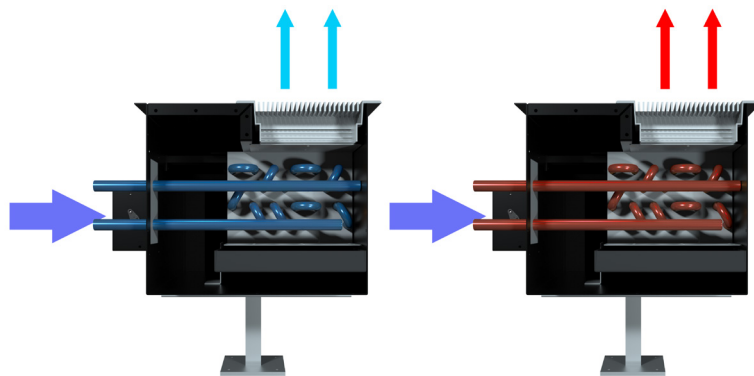


DESIGNED TO MAXIMIZE MODULARITY

- + The LCT is an integral component of the ModuFlex System.
- + Plug-and-play wiring allows for increased flexibility and ease of installation.
- + Power and control signals are delivered to each unit via a single daisy chained cable, with up to six units in a series.

PERFORMANCE AND COMFORT TESTED

- + The LCT assembly is rigorously tested and validated in an underfloor application.
- + The LCT series is tested in accordance with ASHRAE 70-2006.



LCT cooling airflow

NOTE: PEDESTAL BY OTHERS

LCT heating airflow

NOTE: GRILLES ORDERED SEPARATELY

TYPICAL APPLICATIONS

The LCT is especially suited to corridors and areas with large windows where higher airflows and heating and cooling capacities are required. The LCT is recessed into the raised floor plenum, and is designed to handle light foot traffic. This makes the unit well suited for offices, lobbies, schools and universities with raised floor systems along the perimeter. Due to its modular nature and ability to work with other VAV floor devices that may all be controlled from one Price controller, the LCT is also commonly used in conference rooms and offices where supplemental heat is necessary.

FEATURES

- + Sizes range from 4 ft. to 10 ft. in 2 ft. increments
- + Steel construction
- + 2 Pipe and 4 pipe coil configurations
- + Plenum painted black
- + RJ45 plug-and-play control board for single connection
- + 5/8 in. OD pipe connections
- + Stainless steel drain pan
- + Removable end caps facilitate use with continuous or discrete grille
- + Pedestal brackets

INSTALL AND OPERATION

Piping and Wiring

Multiple LCT units can be daisy chained together through quick connect cabling. A maximum number of 6 units is recommended to be daisy-chained together. The water valve for the zone is field wired and powered from the PCM module. Multiple LCT units can be piped in either parallel or series configurations. See Figure 1 for example of a series connection.

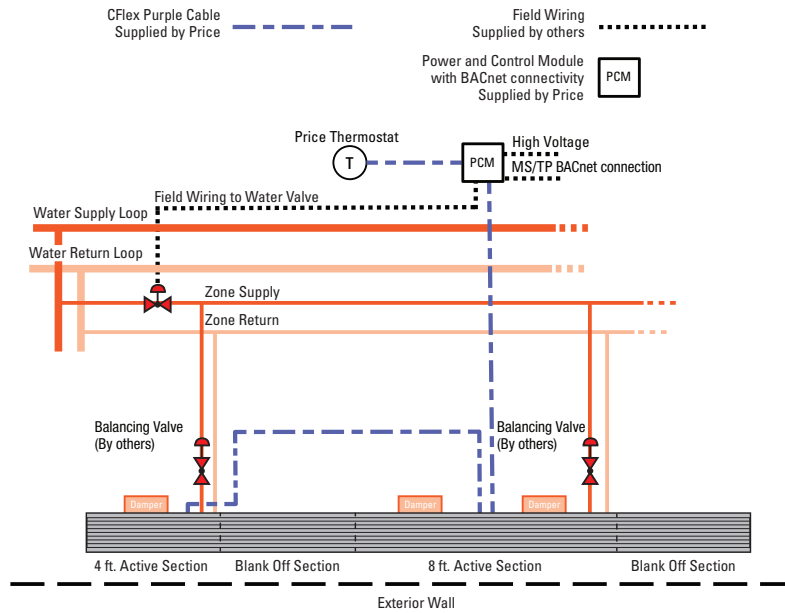


Figure 1: Piping and wiring schematic

Control Details

Cooling

When the space temperature increases above the deadband the PCM starts to modulate the plenum air damper open. The damper will continue to open if demand continues to increase until it is fully open. If a further call for cooling occurs the water valve will be signaled to modulate open while the damper is held at the preselected maximum position.

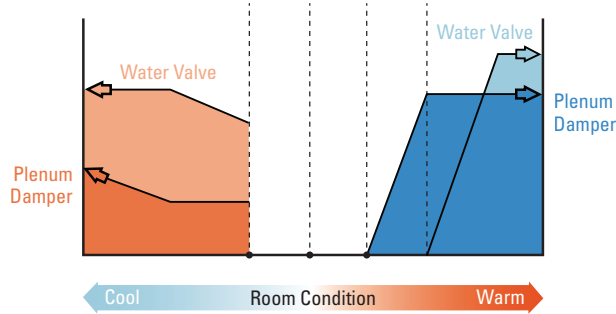
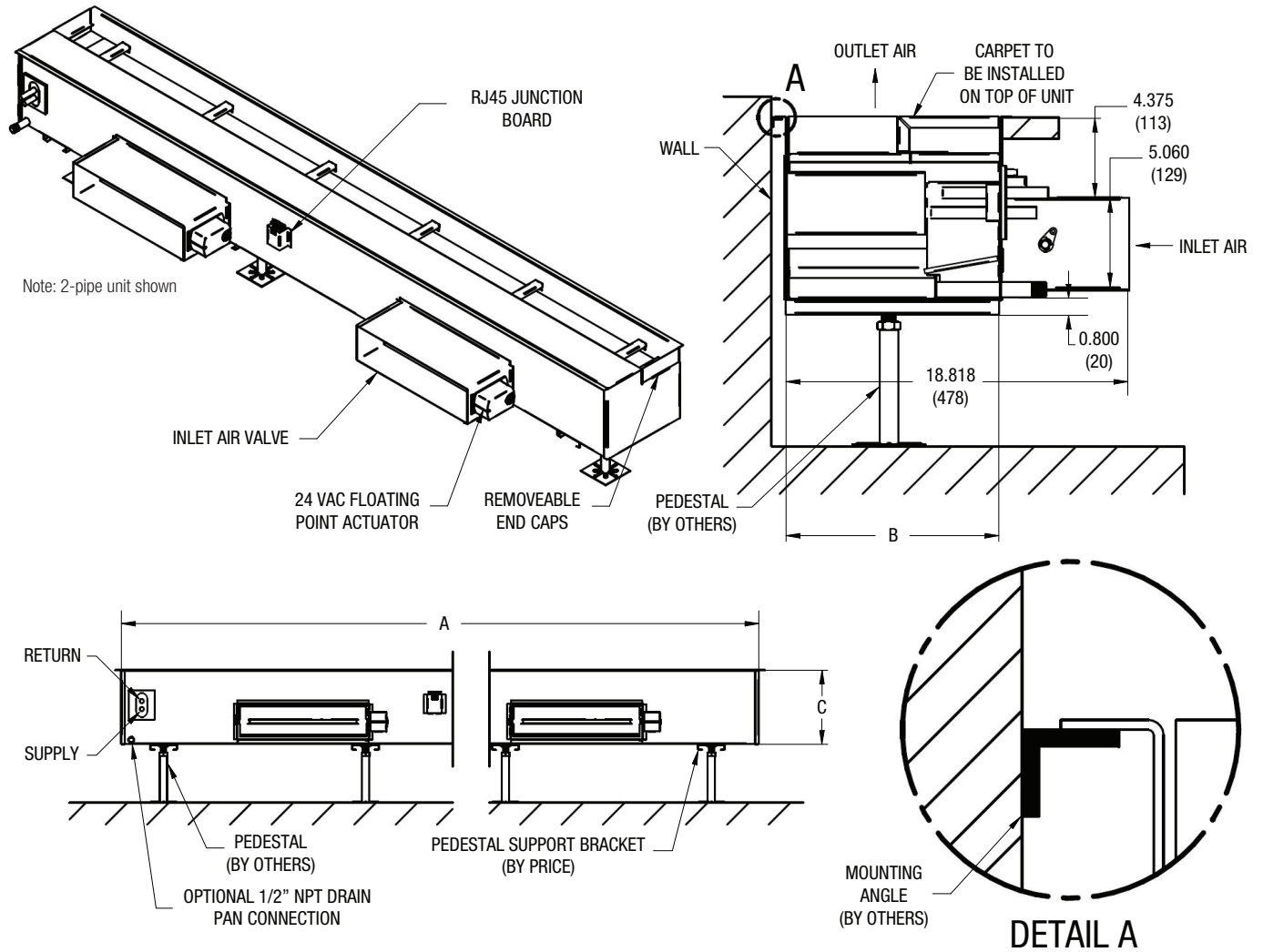


Figure 2: LCT control sequence

Heating

During a call for heating the plenum air damper will be modulated to the preselected minimum heating position and the water valve opened to the minimum heating position. The damper position will be held at the minimum position while the water valve is modulated open proportional to the increase in heating demand. If the valve reaches the maximum open position then the air damper will modulate further open to the maximum heating position.

DIMENSIONAL DATA



NOM. SIZE	NOM. LFG SIZE	UNIT OVERALL			# of Inlets	ROUGH OPENING
		A	B	C		
48 X 12	47 3/4 x 5 3/4	47 7/8	11 7/8	10	1*	48 x 12 (± 1/16)
72 X 12	71 3/4 x 5 3/4	71 7/8	11 7/8	10	1*	72 x 12 (± 1/16)
96 X 12	95 3/4 x 5 3/4	95 7/8	11 7/8	10	2	96 x 12 (± 1/16)
120 X 12	119 3/4 x 5 3/4	119 7/8	11 7/8	10	2	120 x 12 (± 1/16)

* Single inlet units have the inlet in the center of trough

MODUFLEX

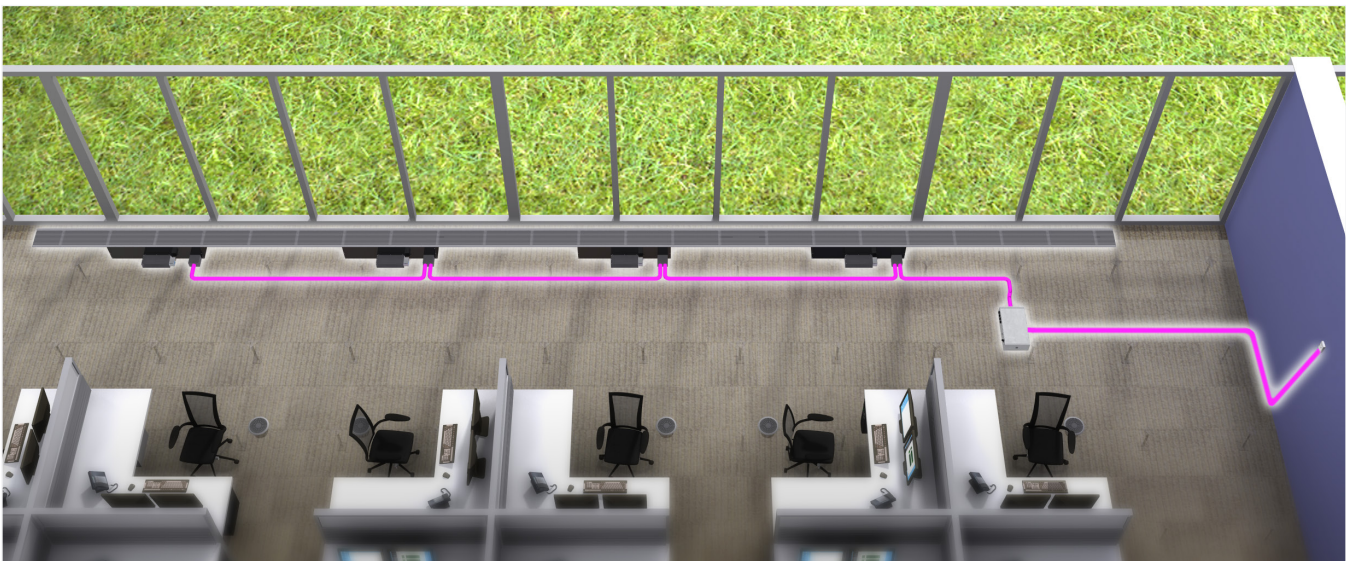
ModuFlex by Price is an Underfloor Air System Solution that is easy to apply. This system combines the benefits of Raised Access Floor (RAF) and Price's years of occupant comfort experience to provide a tailored solution that achieves a comfortable building environment and maximum flexibility. LCT products are most commonly used in perimeter zones.

Perimeter Zones

These zones are typically more complex than interior zones. Perimeter zones generally have larger and more varying loads and often require auxiliary heat. Using the proper system helps control heating and cooling requirements for the space.

Trough Heating and Cooling

An efficient mode of conditioning perimeter zones is by placing drop-in plenum heaters within the perimeter grilles to heat and cool. These units efficiently provide a boost in cooling capacity at the perimeter based on demand. Initially the air damper is modulated to provide plenum air to the zone. If additional cooling is needed the cooling coil valve will modulate open to lower the supply air temperature. In heating mode the water valve will modulate based on the space required from the thermostat and the air damper will modulate to a preselected heating position. This removes the need for ductwork and fan terminals along the perimeter, reducing noise and energy consumption. The LCT units can be easily daisy chained together through stranded plug and play cabling from the PCM power and control module. This allows for a very quick and easy installation that is robust for commercial applications. The Price thermostat is also connected to the PCM through the plug and play wiring which communicates the space temperature to the controller.





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