

Climate Control at the Essex

How does the Fan Coil Unit(s) in your suite work

The built in vertical fan coil unit(s) in your suite is your source of heating and cooling. Heated and cooled air is produced through the circulation of hot and cold water in the piping loop contained within the fan coil unit. The fan coil motor blows air across this piping loop to produce either warmed or cooled air. In the Cooling Season, chilled water is produced and circulated to your unit, and in the Heating season, hot water is circulated to your unit.

A supplementary electric heating element within the vertical fan coil unit does add some measure of flexibility and control over individual suite temperature. This electric heating element activates automatically during the cooling season in the event a minimal amount of heating is required as indicated by your thermostat setting.

Switching between heating and cooling

To switch between heating and cooling is a process that must be schedule twice a year. In the Fall, the Board has directed the Property Manager to be guided by the occurrence of three consecutive days of outside temperature highs at 10 degrees Celsius or less and lows at 5 degrees Celsius or less to arrange for the maintenance company to end the air cooling season by shutting off the chilled water supply, allow the specified time for the water in the system to reach ambient temperature, before turning on the boilers and sending heated water through the same set of circulating pipes to your unit. In the Spring, the same process is reversed. Sometimes, outdoor temperatures fluctuate significantly on a daily basis, making the decision to switch climate modes somewhat tricky.

The direction your suite faces also affects your comfort during the transition period. If you live on the easterly side, you do not experience the afternoon sun that can have a significant heating effect experienced on the westerly side of the building, especially if you do not close your window coverings.

Temperature control in your suite

Each vertical fan coil unit is equipped with a Digital Fan-Coil Thermostat designed to provide your home with reliable and precise temperature control. See figurer to the right.

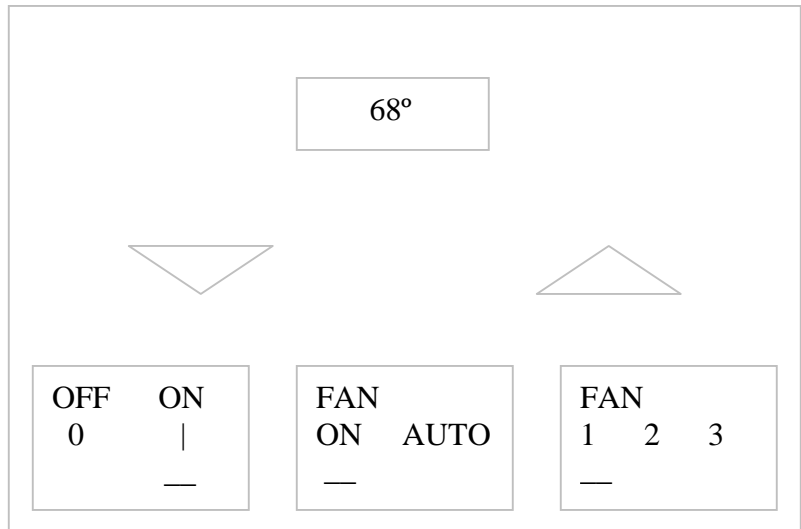
If your thermostat is turned ON, the current temperature in your suite is shown in the centre top digital display.

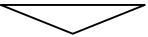
When the system switch is set to OFF, power is removed from the thermostat and the display will go blank. The thermostat will reboot when power is restored with the ON/OFF switch.

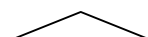
Turn the thermostat ON or OFF, using the lever switch at the bottom left of the thermostat.

The FAN can be set to three different speeds, 1 = LOW, 2 = MEDIUM and 3 = HIGH, using the lever switch at the bottom right of the thermostat. To help to create an even temperature throughout your unit, the fan can be run continually at 1 (LOW) speed, providing constant air circulation

The temperature can be adjusted to a higher or lower setting by using the push buttons directly below the digital temperature display window.



For a lower temperature setting, press the  button repeatedly until you are satisfied.

For a higher temperature setting, press the  button repeatedly until you are satisfied.

How the fan coil responds to temperature settings

The fan coil is equipped with two water temperature sensors that detect whether hot or cold water is being circulated through the building system to the fan coil intake valve.

In the heating season, when hot water is present, the fan coil intake valve is opened to allow hot water to circulate through the fan coil to raise the suite temperature as requested by a higher thermostat temperature setting. And, the intake valve is closed to prevent hot water to flow through the fan coil thus allowing the suite to cool.

In the cooling season, when cold water is present, the fan coil valve is opened to allow cold water to circulate through the fan coil to lower the temperature as requested by a lower thermostat temperature setting. And, the intake valve is closed to prevent cold water to flow through the fan coil, allowing the suite to warm up. In addition, the supplementary heating element is turned on to assist the warming process somewhat.

These actions are summarized in the following table:

SEASON	THERMOSTAT SETTING	FANCOIL WATER INTAKE VALVE ACTION	SUPPLEMENTARY ELECTRIC HEATING ELEMENT
Heating Season – Building HOT water circulating to fan coil unit intake valve	HIGHER than current temperature	OPENS – allowing HOT water to circulate through the fan coil	OFF
	LOWER than current temperature	CLOSES – preventing HOT water to circulate through the fan coil	OFF
Cooling Season – Building COLD water circulating to fan coil unit intake valve	HIGHER than current temperature	CLOSES – preventing COLD water to circulate through the fan coil	ON
	LOWER than current temperature	OPENS – allowing COLD water to circulate through the fan coil	OFF

REGULAR MAINTENANCE

NOTE: A QUALIFIED PROFESSIONAL MUST CARRY OUT ANY WORK INVOLVING REMOVAL OF THE INLET GRILL. THE EXPOSURE TO LIVE ELECTRICAL AND ROTATING PARTS IS HIGHLY DANGEROUS. The master power switch under the fan coil cover should be turned to OFF before any attempt to remove the inlet grill.

Maintenance and repair of the fan coil unit(s) in your suite is the Homeowner's responsibility, but the work must be arranged by the Corporation (through the Property Manager) to ensure the integrity of the building plumbing system.

To ensure the following two maintenance items, for which the Homeowner is responsible, are done a minimum of once a year for every fan coil unit in the building, the corporation has decided to arrange this process for all units and build the cost into the annual maintenance fee. Consideration is being given to doing this general procedure twice a year.

Key maintenance items:

1. **Filter check.** The dust filter, mounted behind the inlet grill, should be checked at least once a month and replaced if dirty (the filter should be replaced at a minimum, every six months). A clogged filter resulting from lack of maintenance restricts the flow of air and consequently the efficiency of the fan coil unit. Between the annual service event, replacement filters are available for purchase (personal check only) at the Concierge desk.
2. **Drain Pan Check.** With the return air grill off, remove the two screws at the bottom of the return baffle, this panel can be raised to expose the fan and motor assembly, drain pan and coil. While the inlet grill is removed, check the drain pan at the base of the coil and remove any dirt or debris that may have collected there. Ensure that the drain spout is clear and that the plastic drain hose from the pan is not kinked or obstructed.

SERVICE AND REPLACEMENT PARTS

If you have a concern that the fan coil unit is not operating properly, contact the Property Manager, who will help you diagnose whether a repair technician needs to be called, and will make the call when necessary.

If required, standard replacements are available from the manufacturer or other suppliers. As part of the process, the Property Manager will work with the technician to ensure the specify unit size, serial number and the part number, and a complete description of the part is provided.

Any costs related to the service call, repairs or replacement parts will be billed to the Homeowner.