

# RESIDENCE HEATING SYSTEMS

## EAST RESIDENCE

The following is a description of how to operate the heating system in Student Residences. A few anomalies are included that may be helpful. Most of the heating systems in Residences rely on a process called "convection" where hot water circulates through a finned pipe inside a metal cover and the heated air surrounding the pipe rises into the room.

CONVECTION:

- a) the transference of heat in a liquid or gas by currents resulting from unequal temperature and the consequent unequal densities.
- b) a thermal process whereby atmospheric circulation is maintained through the upward or downward transfer of air masses of different temperature. [Hot air rises and cold air falls]

The temperature of the water flowing through the convectors varies inversely with the outside air temperature. As the outside temperature falls (winter) the heating water temperature is increased. This is a pre-determined schedule initially set by the Designing Engineer. This approach allows a large heating system to respond to the weather without the cost of numerous and expensive controls.

The water in each residence building is heated with steam which is produced at the Central Utilities Plant and distributed through underground pipes to all the major buildings.

**EAST RESIDENCE** has a hot water heating system and the student rooms are heated by the "convection" method. Students do not have control over the temperature of the heating water. The only means of regulating the heat is by adjusting a damper at the convector. This damper is operated by a knob in the centre of the convector cover. By opening and closing the damper the student can regulate the amount of heat leaving the convector.

**IT IS IMPORTANT THAT THE AREA AROUND THE CONVECTOR BE KEPT CLEAR AT ALL TIMES. THE SYSTEM RELIES ON NATURAL CONVECTION AND ANYTHING IN THE PATH OF THE AIR ENTERING OR LEAVING THE CONVECTOR CAN SERIOUSLY REDUCE THE HEATING CAPACITY.**

**LEAVING WINDOWS OPEN WILL CAUSE PIPES TO FREEZE. PLEASE ENSURE ALL WINDOWS ARE CLOSED.**

## INFORMATION ABOUT YOUR ROOM

Dear East Resident;

I would like to take a quick moment of your time to draw your attention to two important issues of which students in East are often not fully aware. The first issue is with regards to insurance for your personal belongings and the second is in relation to the heating system in East.

Section 5.5 of the Terms and Conditions of your Residence Contract states that you are responsible for ensuring that you have adequate insurance to cover your personal belongings in case of accidental damage or theft and also for liability while you are living in residence. In many cases this can easily be done through an existing homeowner or tenant insurance policy held by your family. If you or your family have not already contacted your insurance company to verify that you have adequate coverage, I would like to strongly encourage you to do so. For your reference, the contract that you have signed as part of your application to live in residence states:

*Notwithstanding anything to the contrary, the University, its officers, directors, employees and others for who it is in law responsible are not liable, directly or indirectly, for loss or theft of personal property, or for damage or destruction of such property by fire, water or other cause, however caused. The University strongly recommends that you obtain insurance against such eventualities. We do not purchase such protection for your property. Coverage can often be obtained through a "rider" on your family's tenant or homeowner insurance policy, which should include liability coverage for injury or damage.*

You may not be familiar with the nature of a hot water heating system such as the one in East Residence - there are a couple of things that are important for you to know. Perhaps the most pertinent issue right now is that the pipes in the system are cast iron and prone to freezing when exposed to very cold air. It is therefore imperative that you do not leave your window open when it is extremely cold outside or for extended periods of time. Even if the window is mostly closed but not fully latched a cold draft can come through that will slide down the wall onto the pipe in the heating system. This small cold draft can cause the pipes to become very brittle and lead to a break. You may not even detect that the room is particularly cold when this is happening. The best way to ensure that you are not susceptible to the unpleasantness of a break is to ensure that your windows are fully closed. I have provided additional information about the hot water heating system on the reverse of this letter.

If you have any concerns about these or any other issues, I encourage you to speak with your Residence Assistant (RA). Should you find yourself in an emergency situation with regards to the facilities, please contact the East Desk (extension 58349).

Sincerely,

Brent Harwood

Assistant Director, Facilities Services