

Multifamily Facility Management Services

THERMOSTATIC RADIATOR VALVES

Description:

In a typical single zone multifamily or small commercial building, not all apartments or spaces have the same heating requirements. These discrepancies are due to differences in distance from the boiler, exposure to sunlight and wind, and the use of internal heat sources (stoves, lights, etc.). Keeping occupants in the coolest unit comfortable sometimes necessitates keeping other units hotter than necessary. Overheating costs money, especially if occupants must open the windows to cool the unit down.

If good control of the overall heating system has been established and overheating still persists, the best solution may be to install controls which allow the heat to be regulated in different parts of the building independently. Such “zone control” can be accomplished in various ways. The most widely applicable method of balancing single-zone heating systems with radiators is to install thermostatically controlled valves on the inlet to each radiator. These valves sense the temperature in the apartment and close the radiator when the desired temperature is reached. This prevents overheating by stopping additional hot water (or steam in the case of a two-pipe steam system) from entering the radiator. Each individual radiator, in essence, becomes its own zone. (Note: thermostatic inlet valves do not work well in single pipe steam buildings as they impede the flow of condensate back down the pipe and can result in waterlogged radiators.)

Many companies make thermostatic radiator valves. Some valves are self-contained, while others have a separate temperature sensing device that is attached to the wall. Some companies specialize in valves just for hot water or steam systems, while other valves are compatible with either medium. Some models are available with a locking feature which prevents the occupant from setting the device above a certain pre-determined setpoint (for example 70°F). This can be a useful added feature in preventing overheating.

How to Implement:

Because of the variety of thermostatic valves on the market, some investigation is warranted to find the best combination of features, durability and price for a particular application. A local heating and plumbing supply house should be able to provide advice on different models to consider, and may also have samples available to look at. Thermostatic radiator valves can be installed by either a trained maintenance person or by a heating contractor. One disadvantage to thermostatic inlet valves is their relatively high price. As a result, if the expense of installing

them on every radiator in a building is prohibitive, selective installation in locations that are prone to overheating may be an option.