



## Multifamily Facility Management Services

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### PIPE INSULATION

#### **Description:**

Distribution pipes should be insulated in any area that is warmer than necessary, including heating and service hot water pipes. Below, is a list of areas where pipe insulation may be effective:

#### Insulate Accessible Heating Pipes

Insulating accessible heating distribution pipes is a good idea whether a building is heated by steam or hot water. Distribution pipes for heating systems may be found in the boiler room and other parts of the basement, including storage areas and hallways. Pipe insulation in these spaces reduces waste by insuring that all the heat produced actually reaches the radiators. Heating pipes in conditioned areas (like apartments) can also be insulated, but the energy savings potential is obviously lower since the heat lost from these pipes simply warms up the apartment. However, if the apartment is too hot (with good boiler controls in place), insulating distribution lines in the apartment may be worthwhile to reduce this overheating.

#### Insulate Service Hot Water Pipes

There are two types of domestic hot water distribution systems: demand and recirculating. The more common type is demand distribution, in which hot water moves into the piping system only when it is called for. Since the distribution piping in a demand distribution system is cool much of the time, the savings from insulating the entire distribution system would not be worthwhile. However, it is worthwhile to insulate the vertical pipe extending from the tank and the first eight feet of horizontal pipe, since hot water often thermosyphons into these pipes from the tank itself. Recirculating loop systems are usually only found in larger (40 plus units) multifamily buildings. In these systems, hot water is pumped continuously around a distribution loop, and individual apartments draw water from the loop as needed. Since the distribution loop in recirculation systems is always hot, all accessible parts of it should be insulated.

#### **How to Implement:**

The standard insulation used for pipes is a split-tube fiberglass shell which fits over the pipe and is taped in place. A thickness of 1" with an R-value of 4 is preferred (except in living spaces

where 1/2" is acceptable). This type of insulation can be installed quickly and easily by an owner or maintenance person.