

Multifamily Facility Management Services

VENT DAMPERS

Description:

All oil and gas furnaces and boilers, and service hot water heaters have vents or chimneys to discharge combustion gases to the outdoors when the burner is on. However, when the burner is off, these vents will also discharge heated room air as well as heat stored in the boiler or furnace. To prevent these losses, vent dampers can be installed.

A vent damper is a mechanical device that reduces heat losses from a heating system by closing off the vent opening (above the draft diverter) when the burner is off. The closed damper prevents heated air from rising and escaping the chimney.

Substantial variation in energy savings is possible for vent dampers installed in multifamily buildings, partly due to the unique features of each particular heating system. Factors such as seasonal efficiency, equipment oversizing, heating system type, boiler location, and the closing time and leakage rate on the vent damper itself all affect the amount of savings achieved.

How to Implement:

There are basically two types of vent dampers available:

Thermally-Actuated Dampers - These dampers are inexpensive to install. They require no external power source. When the burner turns on, the heated air causes the “bimetal” dampers to open. Thermally-actuated dampers are less efficient than electrically-operated ones. As a result thermal dampers are only recommended for installation on domestic hot water heaters which also operate without an external power source.

Electrically-Operated Dampers - Kits are available to install these dampers. The kits supply electronic ignition, a new dual gas valve and a control module, in addition to the vent damper itself. These components are necessary for proper damper installation. Electrically-operated dampers are more expensive to install but are also more energy efficient in operation than thermal dampers. As a result, electronic dampers are recommended for installation on space heating plants.

Each vent or heating stack will require a separate vent damper. Installation and damper selection can be done only by a skilled technician.