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## YOUR BUILDING'S STEAM SYSTEM



**CONSERVE ENERGY, SAVE MONEY**

**Improve the efficiency of your building's steam system.  
It's a win-win proposition.**

*Improving the efficiency of your steam system reduces energy use **and** energy bills. That's good for your bottom line. You also help conserve natural resources, and that's good for the environment.*

*Whether large or small, an apartment house, office building, hotel, museum, restaurant, theater, or religious or government institution, just about any building can improve the efficiency of its existing steam system easily and cost-effectively. The ideas in this brochure will help you get started. Choose ones appropriate for your building type, and review any planned improvements with a qualified engineer.*

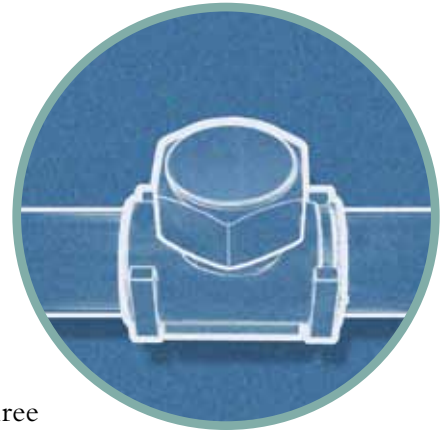
## 10 Ways to Improve Your Steam System's Efficiency

1

### Regularly Inspect and Maintain Steam Traps

A steam trap automatically removes air and condensate, the water that accumulates in pipes as the steam cools. Broken traps decrease system efficiency, making your building more expensive to operate. An organized and regularly scheduled trap inspection and maintenance program can prevent this from happening, and should include:

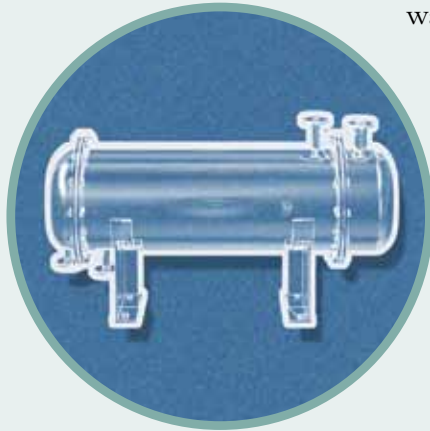
- Inspecting steam traps according to manufacturers' recommendations, undertaking all necessary repairs or replacements, and making a record of all maintenance
- Tagging all main steam traps and maintaining a master-location log for building staff and contractors
- Keeping copies of all trap records at the building and in the management office
- Checking and replacing, if needed, the steam-trap thermostatic element, or "disk," in all radiators every three to five years
- Keeping a maintenance log for each radiator



## 2

### **Install a Condensate Heat-Recovery System**

Condensate heat-recovery systems improve a building's efficiency by capturing wasted heat and water. These systems require installing a heat exchanger and additional piping to divert the condensate and the water that needs to be heated.



The recovered heat can be used in a number of ways, including preheating water for use in apartments and air entering air-handling units, and heating water for use in laundry equipment, dishwashers, swimming pools, and spas.

The recovered condensate reduces the water your building uses in cooling towers, display fountains, grey-water systems, and for washing sidewalks.



### **Insulate the Roof and Building Envelope**

Heat flows naturally from a warmer to a cooler space. So, in winter, the heat inside your building wants out and, in summer, the hot air that's outside wants in. A properly insulated roof and building envelope will help prevent heat loss and reduce your energy bill.

Consider hiring a professional energy auditor to help you find out how much and from where heat and air are escaping. When deciding what energy-efficiency steps might be appropriate, take into account the age of the building, current condition and expected life of the roof, and other conditions.



## 4

### Take Easy, Effective Energy-Saving Steps

There are many practical and easy ways to improve your building's overall operations that will also increase its energy efficiency.

- **Start with the Thermostat** — You can significantly increase energy efficiency without sacrificing comfort by lowering the setting a couple of degrees in the winter. Reduce building temperatures at night or when the building is not occupied.
- **Use the Sun** — During winter, open shades to allow natural sunlight to warm your building. During summer, close the shades or install reflective window-film so the sun doesn't heat your building, a step that is especially effective on facades that receive direct morning sun.
- **Check Water Temperature** — Adjust domestic hot water to 120 degrees. Tap water temperatures set to more than 130 degrees waste energy and can cause injury.

### Replace Single-Pane Windows

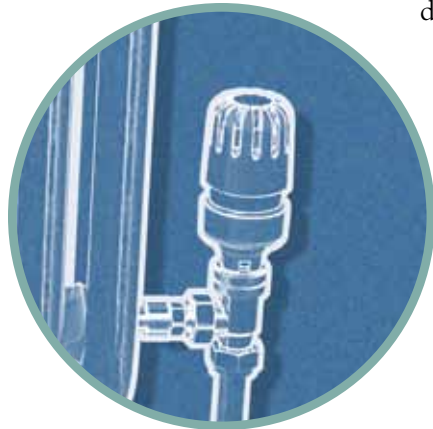
A single-pane window has such a low R value — the ability of a material to resist heat flow — that it is little more than a hole in the wall. If you haven't already done so, replace single-pane windows with Energy Star-qualified double- or triple-paned models.

### Weatherize Windows and Doors

When outside air enters a building through windows and doors, your energy use and bills increase. Prevent this by checking windows and doors for air leaks, and sealing the leaks with caulking or weatherstripping. Install door sweeps on all exterior doors with gaps beneath them. If your building has a revolving door, encouraging its use will significantly reduce drafts and the loss of conditioned air.

### Install Thermostatic Radiator Valves

Buildings that use steam for heating can improve efficiency by installing thermostatic radiator valves on each radiator. This gives people living or working in the building the ability to set the temperature within each room.



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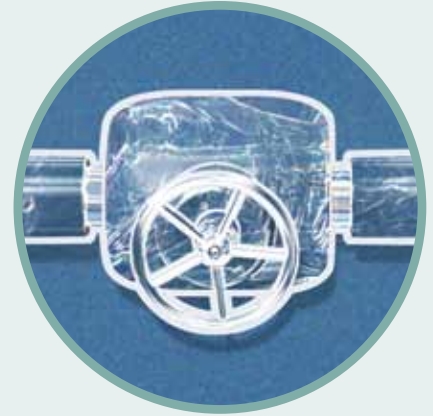
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### **Insulate Pipes, Valves, and Fittings**

Properly insulating pipes, valves, and fittings will help reduce the amount of wasted heat from your building's steam system. There are other advantages, too. Insulating valves and fittings also helps protect workers from burns. Removable insulation jackets can be used on valves and fittings to make maintenance easier.



9

### **Fix That Leak!**

Steam leaks, even small ones, reduce the efficiency of your system and increase your energy costs. Leaks may be caused by a loose connection, leaking gasket, or pinhole, and most often occur in pipe junctions, fittings, and valves.





### Invest in an Energy Management System

There are many advantages to investing in an Energy Management System (EMS), a computer system that automatically controls and monitors all of a building's energy-related systems, including heating, cooling, ventilation, hot water, and lighting. An EMS can be programmed to automatically operate zone valves to maintain comfortable temperatures only when the building is occupied.

These systems also provide monitoring and trending data you can use to improve a building's overall efficiency, and this data is especially valuable in buildings that have multiple zones and/or systems.

By providing critical information on how a building is operating, EMS becomes a powerful tool managers can use to monitor energy use.





## Download Our Comprehensive Energy-Efficiency/Reducing Demand Report

We've prepared a comprehensive document, *Steam Use Efficiency and Demand Reduction Best Practices Report*, which gives detailed recommendations on how to reduce your building's peak demand and overall consumption. You'll find this report at [conEd.com/steam](http://conEd.com/steam).

### How to Reach Us

We want to provide our customers with the best possible service. If you need us, please use one of the numbers below.

**Steam Business Development:** Call 1-212-460-2011; fax 1-212-473-2538, or e-mail [SteamSales@coned.com](mailto:SteamSales@coned.com) or visit [www.conEd.com/Steam](http://www.conEd.com/Steam)

**In case of an emergency** (24 hours a day), call 1-800-75-CONED (1-800-752-6633).

**To schedule a turn-off or turn-on of service** (24 hours a day), call 1-212-683-8830, 1-800-914-9112, or 1-800-75-CONED (1-800-752-6633).

**Steam Distribution Engineering department:** For piping changes or modifications, call 1-212-460-4410 or 1-212-460-6288, or fax 1-917-534-4070.

**Steam Environment, Health and Safety representative:** Call 1-212-894-9520 or fax 1-212-534-4491

## **Steam Safety**

If you see steam on Manhattan streets, immediately call us at **1-800-75-CONED (1-800-752-6633)**.

Steam is caused by water falling on a steam pipe or manhole cover, or a steam leak. We need to check it out. To avoid potential injury, don't walk through the steam or on the manhole cover.



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