



Energy Efficiency Solutions

Thermal insulation of boilers, water systems, domestic hot water tanks and water pipes

Insulation of boilers, hot water storage tanks and water distribution systems is a very efficient way to keep your water hotter for longer, especially if the equipment is exposed to cold conditions in winter.

By reducing heat loss, insulation allows for a lower water temperature setting and thus provides energy and money savings for your hotel. In addition, insulation of water distribution systems results in a shorter time for your guests to get hot water when they turn on a faucet or showerhead, which helps conserve water.

Why should my hotel invest in insulating the boilers and hot water tanks?

Insulation of boilers and hot water tanks should be considered, especially if they are made of a material with poor thermal insulation properties (in which case they will be hot to the touch).

Note that this is not the case of new hot water tanks that come with foam insulation already fitted: they do not need additional insulation.

Pre-cut jackets or blankets are commonly used to insulate hot water cylinders. They are ready made and fit a variety of standard sizes. Their insulation power depends on the type of material and their thickness.



Hot water jacket

As regards boilers: insulation can be applied to various parts, like valves and condensate receiver tanks. Insulation is sometimes referred as “boiler lagging”.

Related criteria of the EU Eco-label:

Thermal insulation of boilers and water systems is not explicitly dealt with by the EU Eco-label criteria.

Should I also invest in insulating the water pipes?

Adding insulation to your hot water pipes is also a low cost, energy efficient solution for pipes that are not located in heated rooms.

There are two main materials available for insulating water pipes: a mineral wool wrap and the more modern pre-formed insulation foam. Their insulation power depends on the type of material and on their thickness.



Besides stopping heat loss, insulation of water pipes also reduces the risk of pipes freezing in winter.



Thermally insulated copper pipes.



Insulation of pipes.

How to choose the insulating products?

Make sure to choose quality insulating products, preferably with a quality standard (e.g. the British Standard for boiler “jackets”).

Can I do the job by myself?

Fitting a jacket to a hot water cylinder can be easy to do but it's better to have a qualified plumbing and heating contractor to insulate. Make sure to leave the thermostat access panel uncovered and to keep the jacket or blanket away from the drain at the bottom and the flue at the top (in the case of a gas water heater tank).

Fitting insulation to pipes can be easy to do if the pipes are accessible but if the pipes are hard to reach, some professional help is probably required.

If you insulate pipes by yourself, make sure there are no exposed gaps and don't forget to cover any stop-cocks, valves, taps or overflows too. If you are using a pipe sleeve, match the sleeve's inside diameter to the pipe's outside diameter for a snug fit. Keep insulation away from the flue if you have a gas water heater.

How much energy can my hotel save by installing proper insulation?

Adding insulation to your water heater's storage tank can reduce stand-by heat losses by 25-45% and save around 4-9% on water heating costs.

Link with other solutions in the database

Renovation of the heating system (solution n°XVII) and regulation of space heating (solution n°XVI) should also be considered to reduce energy consumptions for space heating and hot water production.

If you are considering renovating your heating system in the near future (solution n°XVII), it is recommended that you change your system first and thermally insulate the equipment afterwards.

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