

Save on Your Hot Water Production!

Sound advice for building managers in the restaurant and food industries.

It's no secret in the restaurant and food industries that producing hot water for cooking, washing and cleaning represents one of the highest expenses on the energy bill.

Choosing the right appliance

To reduce the costs associated with producing hot water, such as the cost of energy, the cost of appliances and of maintenance, it is important to make a thorough study of your consumption. To help you make a well-informed choice, here are two questions you need to answer:

→ What are our hot water needs and what is our hot water consumption profile?

This question is important since it will help you analyze your needs in order to select the right heater, since it helps determine the capacity of your hot water tank and the best options for producing hot water.

→ Is the demand concentrated over a short period or spread over several hours? What is the duration of the demand?

The answers to these questions will serve as a useful guide in determining the optimal planning of your hot water production.

Do you know the options for producing hot water?

STORAGE WATER HEATER

This type of water heater is the most popular appliance for producing hot water. Its construction includes a storage tank, a pipe to vent combustion products, located in the centre of the tank, and an atmospheric burner at its base. Its cost is relatively low. Because of its design, a lot of heat is lost when the appliance is idle. The surrounding air circulates through the pipe and cools the hot water in the tank, then migrates out through the chimney, causing off-cycle losses. It's not surprising that the lifespan of this type of appliance is not very long. This is directly related to the intensity of demand to which it is subjected: the higher the demand, the more cold water is added, which causes thermal shocks and shortens its life.

In short:

- Low cost
- Off-cycle heat losses
- Limited lifespan (based on demand)



INSTANT HOT WATER WITH TANK

This appliance is generally used with one or several tanks to meet the needs for hot water in the restaurant and food industry. The water heater becomes more like a boiler dedicated to hot water needs and is also called a “booster”. The water inside a coil is heated by a burner.

This option requires a little more space for the water heater and for one or more tanks. However, the overall efficiency is very good, because off-cycle losses are reduced to a minimum. Since the amount of water the appliance can contain is much less, so are the losses. The tank also serves as a buffer, ensuring that you never lack hot water. And, since the water heater operates over longer periods of time and is subjected to fewer thermal shocks, its lifespan is longer.

In short:

- Good overall efficiency – more than 70%
- Minimum heat losses
- Longer lifespan
- More tanks can be added

Advice to be followed if there is no make-up air unit

One factor that greatly influences the choice of an appliance to produce hot water in a kitchen or a food business is the absence of a make-up air unit. If you do not have one, it is recommended that you choose a sealed combustion water heater.

→ Why choose a sealed combustion water heater?

When the hoods are in operation in a kitchen, a certain quantity of air is vented outside the building. Normally, a make-up air unit replaces the vented air. However, in some restaurants, the absence of such a unit creates negative pressure inside

CONDENSING WATER HEATER

This third-generation appliance is the most efficient water heater on the market and has the highest performance. It is characterized by a thermal exchanger made of stainless steel and by an optimal heat exchange between the combustion gases and the water to be heated. The design of this appliance satisfies the conditions needed for the continuous condensation of water in the combustion products and so part of the energy in the latent heat can be recuperated. The efficiency of this type of appliance can be higher than 90%.

Financial assistance ranging from \$1,200 to \$20,000* is offered toward the purchase and installation of condensing water heaters to encourage optimizing the energy efficiency of your equipment.

*The amount of financial assistance is determined according to the capacity of the appliance installed.

In short:

- Over 90% energy efficiency and energy savings
- Most efficient appliance on the market

the building. This negative pressure adversely affects the effective operation of natural gas appliances. In fact, so that natural gas combustion can attain all its heat potential, a specific quantity of air is needed. When there is negative pressure, the natural gas flame will seek oxygen and, if there is not enough, poor combustion will result. The lifespan of equipment will also be affected.

With a sealed combustion water heater, air dedicated to combustion is fed through a pipe directly outside the burner, so the operation of the appliance is not affected by pressure variations.

For more information on our energy efficiency program, visit www.gazmetro.com or communicate with Raymond Gaulin, your Corporate Account Advisor at 514 890-6086.