

Microwaves: An Overview

Commercial microwave ovens can be one of the most indispensable and frequently used pieces of equipment in the kitchen.

Commercial microwave ovens generally consist of three types. Light duty microwaves provide 1000 watts of cooking power. These are typically used at waitress stations, for office coffee service and in break rooms and vending areas. Heavy duty microwave ovens start at 1200 watts and go up to as high as 2400 watts, with varying cavity sizes. These units are suitable for chain restaurants and convenience store foodservice. The ovens generally reside by the cook line and culinary staff use them to heat vegetables, rice and other side dishes.

Operators can use the third type of microwave as an alternative to a steamer. These units can handle higher volumes of food prepared in full-size hotel pans. Running off of a 30-amp single phase and either a 208 or 230 volt circuit, these microwaves are generally at least 2100 watts.

A number of large supermarket chains utilize these microwave steamers as an affordable alternative to traditional steamers.

How to Know When to Replace a Microwave

While some units from the 1970s remain in use, the typical service life for a microwave oven is about 2,500 hours. A number of signs will signify that a microwave may need replacing.

Here are three signs that a foodservice operator may need to replace a microwave oven.

Cooking Performance: Generally, microwaves either work or they don't. However, if cooking times are getting longer, there may be a reduction of power. For older units, this may signify that the unit is at the end of its service life.

Cost of Repair: When a component in the microwave needs replacing, it is time to evaluate the oven's value. A majority of owners will choose to replace the unit when the cost of repair exceeds 50 percent of the cost to replace. Often the most expensive parts to go out in an oven are electronics, including circuit boards, displays and touch panels. The cost of service can also be a big factor in the overall cost of repair.

Continuous Flashing Codes: Most microwaves have internal diagnostics and code flashes. If a code appears and unplugging the unit for a short period doesn't reset the system, call a service agent. Note that door latches and switches have sensors that are required by code. Commercial microwaves will not operate if these are compromised.

Microwave Applications

All types of restaurants have applications for microwaves, from quick-service operations to casual and even fine dining.

Microwaves are typically used in conjunction with other cooking equipment to enhance speed of service.

Typical commercial foodservice applications include single-portion and bulk reheating, steaming and boost heating, in addition to cooking and defrosting. Vegetables and seafood are two foods that are ideal for microwaves. These units work well when used with foods that are moist, such as vegetables and pasta.

Not so typical microwave applications include non-commercial food applications, such as drying out chemicals, sand, rubber and wood.

Maintaining a Microwave

Microwaves are simple units that require minimal maintenance. Still, there are steps operators can follow to prolong the service life of these units.

Proper cleaning and maintenance are keys to safe and sanitary microwave use. Routine maintenance for these units is simple, but necessary. Regularly inspect and clean air intake filters to keep components cool and help evacuate odors. Clean the oven interior with soap and water. Some units come with a clean filter reminder option. Spills should be wiped up as they occur. Covering food that splatters during cooking will help keep oven cavities clean. Some units offer sealed ceramic bottoms that help prevent spills from leaking underneath the oven.

Rather than spraying cleaners directly onto components, which can compromise the oven's electronic system, apply the solution to rags or towels and then wipe the oven clean. Once a month, check microwave performance by heating a cup of water up to a boil in a defined amount of time. For example, in a 1000-watt unit, boiling time is two minutes and 55 seconds. For a 2000-watt unit, this time is reduced to one minute 30 seconds. This field experiment ensures the oven and its heating elements are operating properly.

Spec Check: Microwave

Due to varying sizes, wattages and capabilities, it is important for operators to do their homework before choosing a microwave.

When specifying a microwave oven, foodservice operators and their supply chain partners have a number of factors to weigh. Here are three critical factors to consider.

Application

Operators need to have a good sense of what they intend to use the oven for, including the types and volumes of food. Determine whether the unit will be used to heat single portions or for bulk reheating. If steaming is necessary, consider a unit that provides this capability.

Size

Considerations should be made on what size of plates and containers will be used in the oven as well as how fast food will need to be heated. This will help determine what size microwave cavity is warranted.

Wattage

The type of food being prepared and volume will help determine the appropriate wattage. For example, bulk defrosting will require a higher watt unit. When specifying a microwave, confirm that there are no power restrictions. For example, if a facility is limited to 110 volts, microwaves will need to be 1200 watts or less.

Controls and Options

Decide if the menu warrants a microwave that stores cooking programs, offers stage cooking or has multiple-quantity options. Determine whether touch or dial controls are preferable. Keep in mind that microwaves are sensitive units and should not be placed on top of open burner stoves, directly above heat lamps or next to fryers. The heat from these units can compromise the oven's service life.

Energy Efficiency and Microwaves

Microwaves are energy efficient by design.

Typically, 1000-watt microwave ovens cost as little as 25 cents a day to run, while more heavy duty 3000-watt microwave costs around 73 cents a day with average commercial foodservice use. These numbers are estimated with 100 cook cycles of 60 seconds a day at \$.10 kWh.

In addition, microwave steamers are considered greener than traditional steam equipment.



420 Westdale Avenue
Westerville, OH 43082

T 614.899.9500
800.492.7400
F 614.899.9797

I www.zinkmarketing.com
E info@zinkmarketing.com