

Counting On COMBI OVENS

These multitasking wonders fill lots of cooking needs in a little space. Make sure they're professionally installed and regularly maintained.

Combi ovens do so much in a compact footprint, letting you steam, roast, grill, poach, proof, braise, bake and “fry” all along the spectrum of dry to moist heat. They're available in every size you could need, from miniature versions to countertop workhorses to full-size and really big roll-in-rack models for high-volume production. Combi ovens also can represent a substantial investment. By following a few good tips on proper installation and regular maintenance, they'll keep cooking for you for years to come.

Water Works

Combis depend on water, and the quality of the water you feed them is the most critical aspect of your oven's operation. Every brand of combi oven requires a minimum level of water quality that must be met; it's usually part of the warranty.

So before you set up for the combi, get your water tested and do it locally. With the detailed report on the quality of

the water coming into the facility, combi oven makers and the water filtration experts with whom they work will help you install the exact water filtration system you need at each particular location. Remember that water filters differ based on the equipment they're filtering; for example, you cannot use the same type of filter you installed for an ice machine for a combi oven. And even with a proper filter, you'll need to delime your combi ovens at least once a year, if not more, if the unit is boiler-based.

If you fail to test your water and don't install the filter you need, you can experience catastrophic combi failure. And water today contains different additives than it did even five years ago. According to an article from *The Consultant* (“Chloramine, A Need To Know,” by Eric Norman, FCSI, MVP Services Group, Dubuque, Iowa, August 2011), the Environmental Protection Agency's 2012 mandate (Stage 2 Disinfection Byproducts Rule) requires that more and more communities add chloramine (which is different from chlorine) to the water supply. Chloramine in hot

Combi ovens (l.) have sophisticated computers on board. Try to position the ovens away from other hot cooking equipment such as broilers and fryers. Photo courtesy of Alto-Shaam.

water is unbelievably damaging to stainless, as well as polyurethane and rubber. It can cause damage after just a few uses of the combi. Don't let the presence of the right filter distract you from the need to *change the filter media!* This is a very common mistake, according to manufacturers. Either foodservice staffers forget to change the filter media or, worse, they bypass the filter when it gets full and clogged and never hook it back up. Many combis will send an error code warning that filters need changing. You can tell employees to use their smartphones to schedule filter change reminders, as well. Train everyone that this is a step that cannot be ignored.

Eye On Installation

If you surveyed combi oven manufacturers, most would tell you that the root of most combi “issues” is a bad installation from the get-go, not only in failing to provide a quality water supply, but in the location of the combi and making sure

connections are right and the oven is level. If you're spending upwards of \$20,000-\$30,000 on these units, which can replace two or three other pieces of equipment in one, it really pays to hire licensed professionals to install the unit properly and run it through several test cycles.

With space at a premium, it's tempting to squeeze a combi into a tight corner or up against other cooking equipment. But today, combi ovens all have sophisticated computers inside in addition to motors, and the electronics need proper ventilation or they can overheat (just like if you prop your PC on a pillow; it gets hot). If the control board is in proximity to a grill, fryer or broiler without a heat shield, you'll likely see an error code before long. And that's key too; you and your staff should be aware of the basic error codes and take the actions required to fix the problems. Sometimes the code conveys something simple;

a touch on the control board eliminates it and the combi returns to cooking. But others are true warnings, including those for overheating and prompts that tell you to change the water filters.

When installing the combi, consider which way your employees or a service tech will need to move it to get at the controls (a few brands have front-access controls) or to clean areas. Depending on the model, it will be easier to move the unit either to the left or the right—but think about this in advance because if you can't move it, you can't service it. For example, most models have an air intake filter for the computer motherboard; the filter is designed to prevent airborne flour, dust

If you need to place a combi near other hot equipment, specify a heat shield to protect sensitive control componentry. Photos courtesy of Eloma.

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and grease vapor from reaching the electronics. These filters need to be cleaned, as well—but will they be easy to reach?

Where the oven is positioned in relation to the floor drain is an issue, too. Hot condensate drains from the combi to the floor drain, but on many models, the oven's air intake is located on the underside of the unit. Don't locate your combi so that the air intake is right over the floor drain—electronics and steamy moisture are a bad combination.

Most combi oven issues stem from a bad initial installation. It pays to have licensed professionals install and connect the unit and run it through a few cycles. Photo courtesy of Convotherm.

might be tempted to use any scraping device to loosen caked-on debris. Most combi ovens today are self-cleaning and it's an option you'll want. Most offer everything from a 20-min. quick-rinse to a heavy-duty, 130-min. or so cleaning cycle. Every manufacturer has recommended cleaning solutions and instructions that must be followed. Cleaners

come in liquids or sprays, pouches or cartridges, etc.; and very specific directions of how to use them. Employees can't deviate from these instructions.

FER once reported a story about a pair of stacked, half-size combis that a service agent found inoperable despite the fact that they were sparkling clean. It turns out the employees who were cleaning the units failed to dilute the cleaning chemical. In its concentrated strength, the chemical ate



Cleaning Regimen

Combi interiors are usually a high-quality, seamlessly welded stainless surface and they should be wiped down every day, preferably with a wet, soft cloth. Never use scratchy materials, steel wool, flat-edge scrapers, or even those green nylon scrubby pads because they all scratch stainless and that leads to corrosion. A daily wipe-down keeps food and grease from building up on the interior surfaces, and wards off employees who

Keep the gasket around the opening clean with warm water, mild soap and a soft cloth. Harsh degreasers or cleaning chemicals can deteriorate the gasket material and ruin the door's seal. Photo courtesy of Groen.



through some of the top unit's neoprene tubing and leaked into the components of the oven below, ruining both.

The silicon door gasket on combi ovens needs to be cleaned with a soft, warm soapy cloth and then rinsed to keep it clean and malleable because the seal it ensures is integral to the oven's operation. Don't use aggressive degreasers or cleaning chemicals on gaskets as they'll deteriorate the silicon. Buy a spare gasket or two and replace these once a year or so.

Touchscreens on combis are, of course, designed to be waterproof, but that does not mean they can withstand pressure hoses. To clean off smudges, use an alcohol wipe. Alcohol wipes are good to have on hand too for the core temperature probes. If you can, opt for detachable probes that store externally (those permanently attached inside ovens seem to take more abuse, according to manufacturers). After each use, wipe down probes with a hot soapy cloth, wipe it with a clean wet cloth and then swipe it with the alcohol wipe to prevent cross-contamination.

You must follow manufacturers' cleaning instructions to the letter. Cleansers come in liquids, pouches, cartridges, pellets and other forms and are designed specifically to be used with each oven. Photo courtesy of Henry Penny.

Drains And Hoses

The drain at the bottom of the combi oven is designed for steam condensate runoff. If that drain is clogged, the oven will not run. Train employees to understand that nothing except water is permitted to go down the combi drain. We've heard stories about staffers pouring pans of chicken fat and shoving chunks of vegetables down the drain—so we know it happens.

The other components that need watching are hoses. Over time, hoses—for the drain lines, the steam bypass, the cleaning pump—will wear out. Check them at least once a year and get them replaced if they're starting to fail. **fer**

Combi Oven Manufacturers

- Alto-Shaam
alto-shaam.com
- Angelo Po
angelopo.com
- BKl Worldwide/Standex
bkideas.com
- Blodgett Corp./Middleby
blodgett.com
- Convotherm USA/Manitowoc Foodservice
convothermusa.com
- Electrolux
electroluxusa.com/professional
- Eloma/Ali Group
elomausa.com
- Fagor
fagorcommercial.com
- Groen/Unified Brands
unifiedbrands.net
- Henry Penny Corp.
henrypenny.com
- Piper Products
piperonline.net
- Rational USA
rational-online.us
- Unox
unox.com
- Vulcan/ITW FEG
vulcanequipment.com