

Are Steam Ovens the Next Big Thing?

Steam ovens are restaurants' best-kept secret. Does the smaller consumer version deserve a space in your kitchen?

➤ BY VALERIE SIZHE LI ◀

Traditional ovens use dry, hot air and radiant heat to cook food. By adding steam—which transfers heat more effectively than dry air—you can speed up the process and cook more evenly. Advanced steam ovens also allow for more precision and customization of not only the oven temperature but also how much steam you're adding and when. German company Rational pioneered the concept in 1973 and it was then widely adopted by commercial kitchens. These ovens can steam, convection bake, or do a combination of the two, which is why they're sometimes referred to as "combi ovens." Interest in both countertop and traditional steam ovens is growing in America, according to Steve Sheinkopf, CEO of Boston-based Yale Appliance.

How Steam Functions Vary

Countertop steam ovens have an external water tank. The regular steam function is similar to stovetop steaming, where food cooks in hot and wet air. Then there's the "steam-bake" function, which injects a set amount of steam into the oven during the baking process. It's especially helpful for breadmaking. The initial release of steam softens the exterior of the dough, which allows the interior to expand more, creating a

taller loaf. In a traditional oven, dry air will harden the exterior, so the interior can't push the crust up as much. Steam ovens can also help with proofing dough.

The basic models we tested offer "steam" and "steam-bake" functions. With a more

advanced model, we could adjust the humidity level when steaming and steam baking in increments of 5 percent. The percentage of water vapor held by the air



When we cooked salmon in the steam ovens, we found it to be more evenly cooked and tender than the one we steamed in a Dutch oven.

ANATOMY OF A WINNER

STRAIGHTFORWARD CONTROL PANEL
Easily set the temperature and time and adjust the amount of steam.

PRECISION CONTROL
Adjust steam in 5 percent increments to fine-tune results.

BIG, CLEAR WINDOW
Allows for easy monitoring of food as it cooks.

STURDY RACKS
Remain straight and smooth when sliding in and out at all times.

WINNER

ANOVA Precision Oven
MODEL: AN900-10 PRICE: \$599.00
SETTINGS: Air-fry, steam, convection bake, conventional bake, steam-bake, proof, dehydrate, broil, roast, toast, defrost, reheat, sous vide
TEMPERATURE RANGE: 77–482°F

COMMENTS: This was the best model, with room for improvement. It was accurate, with precise steam control. A built-in probe thermometer monitored the food in real time. Toast was gorgeously golden. Shokupan, tall and fluffy. Basque cheesecake, burnished and creamy. Steamed fish, tender and juicy. Unfortunately the Bluetooth wouldn't reliably connect, so smart features were limited.

(the "dew point") in the cooking chamber can reach 100 percent. The higher the percentage, the faster food cooks.

In addition, this model offers another feature: a "sous vide" mode. It keeps the oven at the consistent, precise, and low temperatures required for sous vide, typically 130 to 160 degrees. After sous vide cooking, you can broil the food right in the oven to sear it, eliminating the need to dirty another pan while searing on the stovetop, as is often done after cooking in traditional sous vide machines.

After weeks of testing, here's our verdict: Steam ovens are promising but require tweaking to make the most of their advanced features and customizability. You may get a thrill out of a fork-tender steamed fish or a loaf of tall, crusty bread, but be prepared for

some trial and error until recipes specifically designed for steam ovens become more common.

Another factor to consider: Steam ovens are just one option in the world of countertop ovens, a confusing and often overlapping field. We originally tested an earlier version of the Anova Steam Oven featured here as part of our review of smart ovens; in those tests, it was outperformed by June Smart Oven (3rd Generation). The Best Buy from that story, the Tovala, also uses steam but doesn't offer the full range of steam-baking capabilities as the models we included in this review. If you think a steam oven might be right for you, read on to see what we learned.



SCAN FOR VIDEO

WHAT TO LOOK FOR WHEN SHOPPING FOR A STEAM OVEN

➤ **STEAM CONTROL:** Our winning model allowed us to adjust the amount of steam in 5 percent increments. With this model, you can also opt to periodically add steam or turn it off completely.

➤ **A BIG, CLEAR WINDOW:** A bright interior light and a clear window allowed us to monitor food as it cooked.

➤ **STURDY RACKS WITH MULTIPLE POSITIONS:** We preferred racks that slid in and out smoothly at all times. We also preferred having more rack positions.

➤ **TEMPERATURE ACCURACY:** We used temperature probes to check accuracy of the temperature settings, and some ovens were more accurate than others at holding the desired temperature.



Some ovens failed to produce evenly baked cookies, with noticeable dark spots around the edges of the tray.

➤ **USEFUL GUIDANCE:** As we were new to steam technology, we appreciated cooking instructions and recommendations that helped shorten the learning curve. Our winning model offered professionally developed recipes that worked.

➤ **A MACHINE THAT FUNCTIONS AS A TOASTER OVEN:** As these countertop steam ovens are bulky, we want them to replace a toaster oven. Our winning model worked well as a toaster oven, making especially even, golden brown toast.

NICE TO HAVE
➤ **SOUS VIDE MODE:** This mode forgoes the water bath, plastic bag, and immersion circulator that a traditional sous vide setup requires, making the cooking process much easier.

WHAT TO AVOID

➤ **CONFUSING CONTROL PANELS:** The buttons and settings on every model required a little getting used to but some were easier to figure out. One had menu presets displayed in graphic icons that we could only understand after studying the user manual.

➤ **HOT SPOTS AND UNEVEN COOKING:** In smaller countertop ovens—especially those with convection settings—we expect food to cook and brown evenly. However, some models clearly had hot spots. They baked cookies unevenly, with the rear side becoming more brown than the front. Some also toasted bread unevenly. The most common toast mishap was the underside being underdone compared to the top.

➤ **HARD-TO-CLEAN DESIGNS:** Condensation pooled on the floor of the cooking chamber in one model after cooking, with no way to drain it. It was a nuisance to soak up the remaining water.

MINOR FLAWS AND QUIBBLES
➤ **SMALL COOKING CAPACITY:** Some models couldn't accommodate 13 by 9-inch baking dishes. Considering these ovens are meant to stay on the countertop and be used in addition to a wall oven, we deemed the small capacity to be a minor flaw.



How to Use and Care for a Steam Oven

HOW DO I USE A STEAM OVEN SAFELY?
Steam can burn you more quickly than hot dry air can. A pro tip from Senior Editor Lan Lam, who has experience working with combi ovens in professional kitchens, is to open the door slightly and count to 10 before fully opening the oven door. We also recommend standing to the side of the oven door instead of in front of it—and don't lean in as the door opens—so that steam can escape, reducing your risk of getting burned.

HOW DO I CLEAN A STEAM OVEN?
Generally, you can clean and maintain your steam oven just as you would a regular oven. After you use steam, leave the oven door open so that the hot and humid air can escape. Use paper towels to soak up the excess water on the oven floor. Keep the interior as dry as possible when not in use.

SHOULD I USE DISTILLED WATER IN MY STEAM OVEN?
All steam oven manufacturers recommend filling their ovens' reservoirs with distilled water. As the hardness of tap water varies from region to region, we recommend testing your using test strips from hardware stores to see if it's OK to use. Avoid using hard water because scale can easily build up and damage the hardware. You can find distilled water at grocery stores where bottled water is sold. We didn't test this way because the tap water in the city of Boston, where we're located, isn't hard.

OTHER OVENS WE TESTED	
RECOMMENDED WITH RESERVATIONS	NOT RECOMMENDED
WHYNTER Grande Counter-Top Multi-Function Intelligent Convection Steam Oven MODEL: TSO-488GB PRICE: \$430.00 SETTINGS: Air-fry, steam, convection bake, conventional bake, steam-bake, dehydrate, broil, roast, DIY, ferment, yogurt TEMPERATURE RANGE: 85–450°F COMMENTS: Our ability to tweak the temperature and time settings was limited. When using the DIY function, we were able to change settings more freely and experienced good results when making roast chicken and bread. But we noticed unevenness when items in the back right corner of the tray turned out significantly darker than the rest. We also didn't like its control panel, as the functions aren't self-explanatory enough to interpret without studying the user manual.	FOTILE ChefCubii Countertop Steam Oven MODEL: HYZK26-EI PRICE: \$499.00 SETTINGS: Air-fry, steam, convection bake, conventional bake, steam-bake, proof, dehydrate, broil, roast, other presets TEMPERATURE RANGE: 86–446°F COMMENTS: Although it's touted as a "combi" oven, the amount of steam injected into the chamber wasn't adjustable. While small and compact, there was enough room to toast six slices of bread, and it made perfect steamed broccoli and a tall loaf of shokupan. It reads only in Celsius, so we couldn't precisely follow recipes in Fahrenheit. We also noticed uneven browning when items at the back were darker than those at the front. We were disappointed that the cookie and chicken menu presets produced underdone cookies and dry chicken, respectively. Plus, its racks often got stuck when sliding, and a pool of water flooded the oven floor after cooking.

For the complete testing results, go to AmericasTestKitchen.com/AUG23.