



# Combination Oven Guide

Everything you need to know about combination ovens



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# Combination Oven Guide 1



## What is a Combi Oven?

To accurately explain what a Combi Oven is and its benefits to catering it is best to look at conventional ovens to understand the differences between them.

## Conventional Ovens - Compromised Design, Compromised Cooking

### Conventional Gas Ovens

Let's start with the conventional gas oven, the most common type of catering oven. A conventional gas oven has a gas burner at the back of the oven which heats the air inside. The gas heated air circulates in the oven and it is this hot air that cooks the food. Typically professional gas ovens have a temperature range up to 230°C.

### Conventional Electric Ovens

The next most popular option is the conventional electric oven; the gas burner is replaced with an electric element in the base, the back wall of the oven or maybe one in the top of the oven, or a mixture of all three possibilities. The element heats up the air and once again, it is this heated air that cooks the food. The air flow in an electric oven is similar to a gas oven but with the addition of a fan the airflow can be increased helping ensure a more even temperature inside the oven cavity and more even cooking of the food.

### Conventional Ovens - The Compromises

With all conventional ovens, gas or electric, there is a drawback however. There is always a temperature difference within the oven cavity from top to bottom and front to back. This temperature difference varies from day to day, depending on the size of cooking trays used and how full the oven is. All caterers learn to understand their ovens and their particular characteristics and adjust their way of cooking to ensure they get the best out of a particular oven; it's this constant compromise that stops conventional ovens being more efficient catering tools. As well as adjusting the way you use a conventional oven to get the best out of it you also have to follow other rules to ensure it is cooking to its best ability. This includes making sure that internal racking/shelving are not covered in foil to ensure air flow is maximised and that the hot air circulates freely.

Regular cleaning of the conventional oven chamber is also an essential chore, along with the door seal to help maximise thermal efficiency. Cleaning products vary both in price and effectiveness and the end result will change depending what type of product you are presenting, from fried food to meat to fish. Generally higher priced cleaning products are more effective at helping ensure the conventional oven works optimally, but deep cleaning and regular maintenance is essential.

One of the overlooked considerations in the conventional oven is the correct positioning of thermostats, correct positioning is essential to ensure it is not damaged when cleaning the oven. And finally there are the elements and circulating fans. These should be maintained in a clean condition to prevent premature failure and costly repairs. Remember gas valves and gas burners work better if an experienced gas engineer tunes them regularly.

## What about Steam Ovens - Aren't they Combi Ovens?

This is a common misconception. Steam Ovens are Steam Ovens, Combi Ovens are Combi Ovens. Steam Ovens have a long and well proven track record for being dependable catering work horses, producing consistent quality and a healthy product. Steam ovens are generally larger than most, requiring power in the form of gas or electricity and require a constant water supply. On top of this they require water softening systems (to maintain internal parts) a drain to the relevant standard and as in most kitchens a steam exhaust canopy. They are good but they are not the easiest piece of catering kit to live with and are limited by what you can do with them.

All in all, conventional ovens (including the steam oven) are good but they are machines built on compromise and the end result always varies depending on a wide range of factors. This even includes the ones we make at Parry, even we can't defy the laws of thermal dynamics!

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## So what makes Combi Ovens so special?

Now you understand where the compromises are in conventional ovens let's look at the Combi Oven and see how it improves upon them.

### Combi Ovens and the 'Price Myth'?

The price myth about Combi Ovens has been around for a long time. Initially they were very expensive (as all new, cutting edge technology is) but over time their prices have come down to a more sensible level, they are now easily afforded by the vast majority of medium to large scale catering companies. So ignore the price myths, that's all they are.

### Combi Ovens - Combining the best technologies

A Combi Oven combines the best aspects of convection cooking with the added benefit of fan assisted cooking, and the bonus of intermittent steam cooking or full steam cooking processes. Combining all of these technologies together delivers a cooking system that is both very flexible, efficient and easy to predict - a consistent cooking output every time. On top of this, Combi Ovens are also flexible when it comes to power supply and can use electric or natural gas, or propane which makes them a great choice for all types of catering environment.

### Simple cooking, straight forward programmes, simple.

Many Combi Ovens come loaded with complex cooking programmes. Whilst this is great for the few who can make full use of them it is sometimes a little over the top for the vast majority of Combi Oven users. Parry's Combi Ovens come with a smaller, more focussed range of programmes that cleverly ensure that 99% of users can do what they need and because it is simpler to use nearly anyone can take full advantage of the equipment with minimal training. Compare this approach to a conventional oven where the user must understand the oven's characteristics and know how to get the best out of it and you can see why a Combi Oven (especially a Parry oven) is a real bonus in a busy kitchen. This in turn adds to the overall consistency of your output ensuring the quality is as you expect time after time, no matter who's in charge of the oven.



### Combi Oven Cooking Modes

#### STEAM Mode - Pressureless Steam

The Steam Mode cooks food quickly and safely in a closed, insulated cooking chamber ensuring food is moist and succulent - just imagine a big steamer that's easier to control and safer to use and you get the picture. With this type of cooking there is no flavour transfer so there's no reason not to mix it up and cook what ever you want all together. A faster, more efficient way to manage time in your kitchen.

#### HOT AIR Mode - Circulated Hot Air

The Hot Air Mode delivers uniform temperatures throughout the oven, perfect for ensuring evenly browned baked goods and much quicker cooking times when compared to a non fan assisted oven.

#### COMBI Mode - Combination of Steam and Hot Air

Combining both the steam and hot air modes, the Combi Mode can cook food up to 50% faster than a convection oven whilst the addition of steam in the process ensures that the food maintains essential moisture. The Combi mode also eliminates the need for basting roast meats, reduces product shrinkage whilst at the same time delivers perfect browning. It is ideal for baking hard crusted breads or reheating (rethermalization).

## Combi Oven Benefits - More Flexible, More Reliable & More Profit!

- 3 Combi Ovens cook between 30% and 40% faster than conventional convection ovens.
- 3 Roasting meats in Combi Mode reduces shrinkage by up to 30% yielding a juicier and more succulent product.
- 3 Combi Mode roasting increases productivity while preserving quality.
- 3 Combi Mode allows for browning and crispness. This can be enhanced with the Hot Air Mode near the end of cooking.
- 3 Steam Mode cooks Shellfish rapidly, keeping them juicy and locking in flavour.
- 3 Hot Air Mode works just like a conventional convection oven for baking biscuits and cookies, cakes and pastries.
- 3 Combi Mode is perfect for high sugar recipes and reduces the chances of a scorched product.
- 3 Combi Mode is perfect for pastries and other yeast-raised products. Baking higher and lighter products.
- 3 Meats cooked in Combi Ovens give greater plate coverage and by turn improve your profitability.

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## Are there any special considerations?

Now you understand how flexible and productive a Combi Oven can be it's time to look at the technical and environmental considerations when buying one.

### The Importance Of A Calcium Treatment Unit (CTU) - Protecting Your Investment

Using any type of steam process invariably means scale build up. As water evaporates it leaves behind mineral deposits on any surface it comes into contact with. It is essential that Combi Ovens using steam mode regularly are supplied with water from an inline water softener. This ensures they stay working for longer, avoid any costly repairs and work at maximum efficiency. Failure to do this can result in premature failure of steam jets, elements or steam generators. Circulation fans may also become out of balance, causing vibration and fan motor failure. Regular readings of the CTU meter is required and replacement of the canister when necessary. In extreme cases where VERY hard water is encountered a reverse osmosis unit is advisable. It is essential that before any installation that a water assessment is carried out to avoid any unnecessary water treatment costs.

Please note that parry catering equipment advise a reverse osmosis water treatment kit be fitted to your combination oven if your water content contains more than 10ppm chlorides. Failure to do so could result in voiding your warranty with this equipment

Parry offer a FREE water assesment. To find out more call us on 01332 875544.

### Maintenance - Keep Your Oven At Its Best

Which ever model you have, regular maintenance by a trained engineer is also a must. This will save you money and time and keep your oven working at its optimal level and ensure it also has a long and productive working life. Over the life of the oven this is the single easiest way to maximise the return on your investment.

### Electric Supply - Check It First

You must check your electric supply before ordering (single or 3 phase). If you are not too sure what this means consult your electrician or call Parry on 01332 875544 for an explanation, help and advice.

### Oven Placement - Putting It Somewhere Safe

Sensible and safe Combi Oven positioning within a kitchen is a must. All installations must be carried out by a qualified installer, to the correct local regulations.

#### Rules of thumb for Combi Installation are:

- Combi Ovens should be sited under a working canopy.
- Combi Ovens should have adequate room around the unit to allow for the combi electrics to remain cool.
- Next to a six burner hob pumping hot air and grease laden vapour into the combis cooling vents is not a good idea. Also right next to a freezer is not a good idea. Place in a reasonably well ventilated space.
- Combi Ovens have BIG doors, make sure that the ovens doors can be opened fully without obstruction.

### For More Information Or To Arrange A Demonstration

We hope this document has helped you understand how flexible and productive Combi Ovens are and how they bring new dimensions of quality, consistency and ease of use to medium and large catering environments.

For more information about our full range of Parry Combi Ovens or to arrange a working demonstration call Parry on 01332 875544.

# Cook Smarter - Cook Combi

