Cooking Ranges Explained

The cooking range is the traditional heart of a kitchen. There is little that can’t be cooked in one. There are four types of cooking range.

Open top burners

Open top cooking ranges are either gas burners or electric radiants with an oven underneath. The most common configuration is for either four or six burners or radiants, but a greater number of burners or radiants are available for very busy kitchens. Their big advantage is fuel efficiency, since almost all of the heat is directed at the cooking pan and not into the kitchen environment. Direct contact with the heat source also means pans can be heated very quickly.

Key points to look for when buying a range include at least one burner or radiant that is more powerful than the others for fast boiling or heating large pans. Also look for ease of cleaning as ranges get very dirty. Ensure you buy a model with a build specification rugged enough to meet the demands of the kitchen and check for availability of spare parts.

Solid Tops

These have a solid cast iron top heated underneath either by strategically placed gas jets or electric elements. They will have an oven underneath the same as an open burner range. Their advantage is that size for size, they can accommodate more pans than an open burner range and pans can be moved around from fierce direct heat to a cooler part of the top. Can be wasteful on energy where there are unused areas of the top being heated.

Key points to look for on a solid top include seeing if it just part of the top can witched on when just a few pans are cooking to save energy and has the stove got a rapid heat point for fast boiling?

Boiling tables

The top is exactly the same as a standard cooking range, but with a boiling table there is no oven below. This is useful for reducing purchase cost when there is already sufficient oven capacity in the kitchen. The space below is also a convenient storage area for pans.

Island Suites

These combine a cooking range with other prime cooking units such as a salamander grill, deep-fat fryer, pasta boiler, griddle and char grill. Their reputation is for withstanding the most punishing of cooking demands in busy kitchens. The closeness of cooking functions saves on space and allows chefs to control several cooking functions close to hand. While they are mostly an “island” situated in the centre of a kitchen allowing chefs to work from both sides of the range, they can be wall-facing so that all the cooking stations are in a line. There are two types of island suites.

Modular Island Suites

This system is usually bespoke in construction, with the individual cooking units that a kitchen needs bonded together to for a seamless unit. There is a wide range of options which can include a burner range, a solid top, fryers, pasta cookers griddles, ovens, griddles, grills, char-grills, induction hobs – in fact any type of prime cooking process.

One-piece island suites

These are usually built as a solid cooking suite in the factory and as well as off-the-shelf configurations, bespoke units can be built to order. Since these are modelled on the classic tradition of island suites, they tend to stay with dry heat as a cooking medium rather than offering fryers and water-based cookers as part of the configuration.

Look After It!

All professional catering equipment is engineered to take hard use and to be easy to use, but there are few items as simple to operate and look after as the cooking range. There is just one golden rule to keep performance high and unnecessary maintenance costs low – keep it clean.

With gas fired cooking ranges, there will be high performance burners designed to deliver the maximum energy efficiency conversion from the gas to the heat output. Gas burners almost always operate on a star system with mini jets of flame shooting out of the burner in a circle.

The way burners are designed is that the hottest part of the flame is just beyond the deep blue core of the flame. To burn at maximum efficiency the gas needs to be mixed with air which will come through a vent in the gas burner delivery pipe. The efficiency of a cooking range burner assumes that the burners and the air vents are clean and not obstructed by food debris.

In a busy kitchen, food spillage on the cooking range is inevitable. When food falls into a gas burner it immediately burns, turns to carbon and blocks one or more of the jets, either completely or partially. This disrupts the gas flow and the mix of air and gas and causes energy conversion inefficiency. Cooking is slower and more costly.

Any major spillages on gas jets should be cleaned immediately, minor spillages should be cleaned at the end of shift. A useful tip for gas cooking ranges is to have tin foil spread underneath the burners so spillages can be binned and wiping down made easier.

Cleaning behind and underneath cooking ranges is as important cleaning the surface. Having a cooker on castors with a flexible gas connection hose makes this easy, a point to consider when buying a cooking range.

Most cooking ranges have an oven underneath and the same cleaning principles surrounding spillages and gas burner efficiency apply. What is common to both electric and gas cooking range ovens is that door abuse costs money.

Doors need closing firmly, not slamming, which will give premature hinge and closing fastener damage. If the oven door is pull-down rather than side opening, there is an additional damage risk if the drop-down door is used as a step to reach shelves above the range. Where the cooking range is part of an island suite and cooking utensils are stored above the unit, it is a too common practice by chefs to use the drop-down oven door as a stepladder.

Electric hob cooking ranges are built around stainless steel surfaces. The hobs will burn off any food spillage, but other spillage will drip onto the stainless steel top. Stainless steel used in cooking range construction is tough and polished to make cleaning easy. Scrubbing burned-on food debris with hard wire scrubbers will damage the surface of the stainless steel and lead to harder work to keep the stainless steel clean. It is better to use a professional detergent spray formulated for cleaning cookers and a recommended cleaning pad.

When a service engineer calls for scheduled routine maintenance part of the service call will be ensuring that the oven cavity and the burners are clean. The engineer will do this, but the cost will far higher than if the kitchen staff had done the cleaning first.
The cooking range may be simple to use and work with, but needs the same level of operational care as any other item of prime cooking equipment.

In brief

Do

- Clean any spilt food from a range immediately
- Ensure gas burner jets are not clogged
- Clean pan supports weekly
- Putting sheets of tin foil under the gas burners makes cleaning easier
- Clean oven cavities weekly

Don’t

- Use harsh abrasives on stainless steel
- Stand on drop-down doors
- Have pans too near the edge of the range
- Slam oven doors
- Leave jets turned on when there is no cooking

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