



## Designing the Perfect Grill or Short Order Station

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**T**he grill, or short order area, is a key station in almost any cafeteria, lunch counter, dinner or snack bar. Yet this station is often the one that has the longest lines and creates the greatest frustration with incorrect orders or items not prepared properly. From a food safety perspective, a grill station is a high-risk area. Improperly stored or prepared food in grill areas are prime candidates for creating foodborne illness.

While there have been many changes in both product offerings and production/holding systems, many grill stations follow designs and equipment layouts developed for coffee shops and dinners in the 1940s and 50s. The major burger chains have spent considerable sums researching new systems and encouraging new technology to resolve problems with food quality and speed of service. The results of these efforts are readily available to most users either in the form of new equipment or design concepts visible to anyone visiting one of their restaurants.

Grill stations are often located in view of the customer in on-site cafeterias and snack bars. They are very busy stations, which put the server under a lot of stress during peak periods. In these settings, the grill person should face the customer or at minimum stand no more than 90 degrees from

the point of service. This allows easy communication with the customer and reduces unnecessary movement from preparation to service. The layout and equipment of a grill station needs to be carefully planned for optimal ergonomics.

Since most grill areas are visible to the customer, the design should shield undesirable sight lines, trashcans and open storage areas. In considering both aesthetics and ergonomics, the fryer area should be a separate station, preferably at the rear of the grill station. Providing the fryer as part of the grill line compromises workspace for both the grill and fryer.

Also, the rear of the fryer is very unattractive to a customer facing a grill station. A separate fry area also allows easier transfer to a deli or hot food station.

In addition to the cooking equipment, the design and the layout of a grill station should include adequate refrigeration for raw products with

separate holding areas for meat, cheese, poultry and fish. Most grill stations require easy access to a large quantity of bread and rolls and provisions for toasting buns. A work area for assembly of sandwiches and grilled items is important along with both cold and hot bain maries for condiments, sauces and toppings. Many grill stations also prepare breakfast items,

so the food wells are used for batters, ingredients for omelets and shortening.

With grill and short order topping choices abounding, there is often a need for at least three 12x20 wells. At least one of these wells should be heated and depending on the daily offerings, the hot section may need to hold liquid cheese, onions, chili, gravy, peppers, etc. Since the finishing or topping area is usually adjacent to the hot grill or fryer areas, the refrigeration must be fully NSF 7 compliant (41 degrees Fahrenheit) and equipped with as large a compressor as possible. A small insulated heat shield may also be required.

To combat soggy sandwiches for takeout customers, quick-service chains have made a real science of bun toasting. Specially developed toasters are now referred to as bun conditioners. The purpose of these units are to both warm and caramelize the bun, sealing the surface so that the liquids from the meat and condiments don't soak into the bread, creating a soggy sandwich. You should consider bun conditioning if the facility you are planning has customers who will consume the purchase off-site or when sandwiches are wrapped and held in slides or warmers.

### Additional Space for Holding and Pass Area

In cafeteria settings, many operators want to be able to display daily specials on a plate or stand next to the station. Ideally this can be integrated into the design of the protector case if the

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equipment is confirmed early in the design. The configuration and location of the service pass to the customer is also a critical element. Mirroring the "made for you" programs of the quick-service chains, operators are relying less on sandwich slides and holding warmers, returning to making individual orders on demand. Therefore, adequate space is required for staging and passing each order. The pass should never be over a hot fryer or charbroiler. In grill stations with limited space, the pass may need to be over the grid-dle section, but the reach can often be a challenge to staff members who are small in stature. The ideal pass is right next to or above the area where grill sandwiches are dressed. Also, consider that a pass must be accessible for those in wheel chairs.

Orders could pass under a protector case if it has an open area on the bottom or a 14- to 18-inch open space could be provided next to a wrap or work station. The pickup area should also include a warmer for fries and other sides available for grab-and-go.

### Par Cooking

Many operators are now par-cooking grilled products and holding them in high-tech humidity controlled warming drawers or containers such as those offered by Winston (C-VAP), Carter Hoffman (AccuFresh) and Prince Castle. Par cooking cuts down the cooking time after the order is given, helps ensure the product is cooked thoroughly on both sides and provides more production capacity in a smaller area. It also eliminates the common and unsafe practice of banking grilled items on the colder side of a grill or in a pan on a countertop. In well-managed operations, when a grill person receives the order, the item to be grilled is taken from the warmer

drawer, placed on the hot grill or charbroiler and finished with the sizzling flair the customer expects. The customer receives a hot juicy sandwich with only a one- to two-minute wait; and food waste is reduced since unsold products left in the warming drawers are safe for quick chilling and reuse for tomorrow's chili or chicken Caesar salad.

### More Equipment to Consider

Other equipment that may be required at high-volume grill or cook-to-order stations include a bun slicer (if buns are freshly baked on-site or delivered unsliced), a conveyor toaster or salamander for melting cheese on open-face sandwiches, and a roller applicator for butter or margarine. A drawer or niche should be provided for the grill cleaning tools.

Most grill or cook-to-order stations have one or more fryers. On all but the lowest volume operations, provide two separate fry pots—either a spit pot model or separate 7- to 9-inch wide fryers. Foods with strong flavors like onion rings, fish, etc. won't contaminate the oil and the taste of a fryer used for potatoes and other more delicate items. One side of the fryer area should have an undercounter freezer with clear space on top to fill fry baskets. A worktop on an undercounter freezer is usually adequate, but it can't be shared or compromised with bagging and warming functions.

If fresh breaded products are planned, you need to add refrigeration (could be wall-mounted like McDonalds) and a battery dipping area (often an extension of the front of the fryer). The opposite side of the fry stations should have a finishing area. A dump or finishing station is used for salting, bagging and holding product. Well-designed fry finishing stations like those from APW, Marshall and Keating have integral heat lamps and shields to keep air currents from cooling and drying out the product. Drawers under the dump area are

used to collect and remove crumbs and excess salt.

The finishing area also requires space for fry cones or cups that are easily accessible. Many operators now offer two sizes and cups are becoming more popular than paper bags. The popular "super size" cups take four to five times more storage space than paper fry sleeves or bags. Ideally fry cups or boxes should be stored in dispensers that can be either mounted on a wall or set into the countertop of the finishing station.

### Remote Order Entry

Remote order entry is an emerging trend in make-to-order stations like grills and deli stations, and should be considered in the design of high-volume facilities. Most quick and full-service restaurants have always had remote printers and video displays to relay orders from the order taker or server to the grill station. New technology systems allow customers in cafeterias and other retail settings to select and pre-order custom prepared items using a variety of input devices. One of the more popular systems are remote order kiosks or customer order terminals (CAT) with touch-screen displays that allow customers to select their choice and size as well as all the sides and condiments.

An alternative is having an order taker with a remote hand-held terminal stand in front of busy stations during peak periods. After entering the order, customers are now free to pick beverages, salad and dessert or even complete their transactions. They can then return to pick up their grilled items at the time indicated on the printed order slip.

Progressive operators are implementing remote order systems on office, college or hospital computer networks or Web sites so staff can order directly from their work area or nursing station. The design of any grill station in a larger facility should at least consider one of these systems and at minimum provide a location, power and empty conduit for a printer or display device and the control unit.

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### Ventilation

A grill or short-order station has demanding ventilation requirements. High-volume grills and charbroilers are usually considered in the heavy cooking category (300-350 CFM/ Lineal Foot) and can generate far more heat, smoke and grease than conventional cooking lines with ovens and range tops. Also consider that an island-style grill station often needs 60 to 80 percent more exhaust volume than wall-mounted hoods, unless the grill station is enclosed in glass. Island exhaust hoods are usually designed with V-bank filters that exhaust air from two sides, similar to ventilators designed for back-to-back cooking lines. If make-up air is provided integral to the hood, make a special effort to ensure that it is conditioned and air volumes and flow are fully adjustable. The slightest imbalance can cause smoke from the grill to blow into the face of the customer or grill cook.

### More Additions to Consider

Facilities using short-order grill stations are often open extended hours, perhaps as many as 18 hours daily. Considering the amount of grease that collects during service, regular cleaning is a must. However, with the long service periods and length of time the grill remains hot, removing and cleaning the filters is a real challenge. When planning a facility like a college union, hospital snack bar or other operation with extended hours, you should seriously consider a self-cleaning water wash type hood.

On an island or display grill, the fire suppression system should be as invisible as possible. Kidde's fire suppression systems are available with small diameter tubing and fittings that can be hidden in the corners or front apron of the hood. Kidde's nozzles also have integral dust caps, which aren't as obtrusive as the red or orange two-piece caps on other systems. Water mist-style sprinkler heads hanging down over open grill stations present the worst appearance, blocking

sight lines and quickly becoming coated with grease and soot from the cooking process.

### Griddles

If ventilation capacity and the potential for smoke roll from the grill is a concern, consider using a groovy griddle rather than a charbroiler. Groovy griddles offer two of the benefits of a charbroiler—grill marks and draining grease from the product. Since they are typically ordered as one-third or one-half of a standard griddle, you have one utility connection to consider, rather than two, and you don't need to deal with the gap between the broiler and griddle.

If the grill station has an especially heavy breakfast business or specials like cheese steaks or fajitas that require a large amount of grill space, consider specifying a lift-off griddle top for the charbroiler section. The lift-off section should weigh no more than 30 pounds and should have an integral grease catch or draining

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## Grill Station Checklist

A well-planned grill area needs the following components:

- Grill equipment appropriate for menu items, volume of service and ventilation system capacity.
- Built-in refrigeration under the grill with side-by-side drawers. An open bain marie with a refrigerated base for ingredients and toppings. Ideally the refrigeration compressor should be remote or away from the cooking equipment.
- A drawer-style humidity-controlled warmer (C-VAP or Carter Hoffman) for holding par-cooked products for finishing.
- Adequate space for rolls, buns and bun toasters/conditions and a space for sandwich or plate assembly.
- A freezer for the fry station and adequate area for dumping fry baskets, salting, bagging and holding fried items.
- Storage for plates for dine-in and wrapping papers for take-out.
- Holding and pass area for finished orders, preferably without heated sandwich slides. Fried items may be held in a warmer since they have a longer shelf life than sandwiches.
- Flexibility to accommodate varying demands for both breakfast and lunch.
- Finishing station with holding for hot and cold ingredients and toppings, and safe temperatures. Provide an easily cleanable work area for cutting board for wrapping and dressing grilled items. (May use cutting board on salad refrigerator for smaller projects)
- Hand sink with soap and paper towel dispenser.
- Trash containers that are invisible to customers.

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device. These units are available from several of the major charbroiler manufacturers as an accessory, or they can be ordered from accessory supplies like Franklin Machine Works. Make sure to provide nearby storage for the griddle top when it is not in use.

In operations where very high volumes and speed of service are required, consider using a clamshell griddle. With two grilling surfaces cooking time is reduced by 50 percent and the need to flip the product is eliminated. Clamshell grills are used by major chains like McDonalds and Chick-Filet, and can be ordered with flat or grooved surfaces. In operations with a breakfast menu, at least one of the grills should be flat. Clamshell grills are not as desirable as flat grills or broilers for island display cooking or front service line installations, since the customer would only see the mechanism on the rear of the unit, not

the product being grilled. Clamshell grills can cost four times more than conventional griddles, and require more maintenance. This includes changing a Teflon cover on the top platen, used to keep food from sticking to the top when it is lifted.

Special care needs to be taken to allow access for cleaning between the rear of a grill/griddle and the sneeze guard or protector case on front line grills. Hinged or sliding glass protector cases make cleaning much easier. The back of the counter cooking equipment is often galvanized metal or has access plates and other hardware that are best shielded from the customer's view. At minimum, always specify countertop equipment used for display grills with a finished stainless back. Providing a custom removable stainless channel can cover both the utilities and back of the equipment and close off any gaps between equipment and the counter, allowing easier cleaning.

Rear electrical or gas connections to equipment can add three to four inch-

es of space or clearance requirements between the inside of the counter and the equipment. Some models of countertop grill equipment allow gas or electrical connections from the side, rear or bottom. Side connections are ideal because utilities can be routed through the counter or spreader panels on each side of the equipment. This eliminates the need to increase the width of the counter and provides easier access for service or shut off devices. Alternate utility connection points may need to be specified as a special option, so the utility routing should be planned before the equipment is ordered.

### Don't Forget the Hand Sinks

Last, but certainly not least, the design of a grill station needs to include easily accessible hand sinks and trash containers. In display grill stations, these items should be integrated into the work counters. Hand sinks require soap and towel dispensers, which are often vendor-furnished. These dispensers can be unsightly, so you may want to add a shield or cover to hide them from view. No room for a hand sink on a wall or countertop? Consider Kevry's "handsink-in-a-drawer" that can be mounted under a countertop.

No other area of a kitchen has been affected more by new technology and menu changes than grill stations. New production and service methods used by chains are the result of huge efforts in research and new product development. They help resolve long-standing problems with speed of service, productivity and food safety. Anyone designing or specifying a grill or short-order station should take advantage of these solutions and incorporate them into their design. □

### About The Author

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