

around the HOUSE

Universal Designed & “Smart” Kitchens and Appliances (Part 2)

As discussed last month, industrial designers are enthusiastically embracing the concepts of universal design (UD) in kitchen and bath appliance creation. They are researching design criteria based on the human senses. User-friendly appliances are and will continue to be a high priority for manufacturers. Of course, this focus makes sense for them in the effort to increase sales figures and the company bottom line. As wars unfortunately persist and the baby boomer population matures, look for appliances and most product designs to have a continued emphasis on UD/inclusive design for all.

My reason for writing these articles on appliances, besides the fact that some of these new products really rock, is because you may not have the financial wherewithal for a complete home or kitchen UD “smart” makeover. You can, however, benefit from advances in UD and “smart” (energy and water saving) design by selecting appliances with an eye out for the features we will discuss.

When the time comes for an appliance upgrade, this awareness in product selection will go a long way in bringing you the benefits in an otherwise less than optimum designed home or kitchen.

Get in the Zone

It will serve us well to first look at the traditional kitchen work-triangle basics as well as the new “work zone”

approach to kitchen design as these spaces become larger, feature multiple cooks, and are often the center of the home during social gatherings.

The sink, refrigerator/freezer, and cooktop were usually placed in a work triangle in the typical post-World War II

but that can be at odds with our 26-foot work-triangle rule. The solution can be combinations of triangles to intertwine within the kitchen for a complete well-oiled functioning unit. For example, flanking the traditional kitchen triangle may be a lower “work zone” area for a child, Grandma, or wheelchair user. A lowered sink in an island or peninsula with an under-counter drawer microwave and cutting board would serve this area well. It can be tied into the other triangle with a side opening refrigerator/ freezer combo (see last month’s article).

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To ensure residents’ complete independence, this area may even have its own drawer-style dishwasher and refrigerator. These units can be expensive, so an option is to raise the dishwasher on a pedestal so the upper rack is even with seated users’ arm height and a standing person does not need to bend over to access it.

I like to include lower-level seating near this “zone” in order to enhance the social setting and provide company for seated users. When possible, I specify a higher 42” serving bar near the main sink. This provides high and low seating in the overall kitchen design and doubles nicely as your choice of breakfast bars. These varying-height serving areas intermingled with the preparation zones make for great casual entertainment areas in the kitchen as well.



Wheelchair users will find it convenient to use a raised dishwasher adjacent to the sink; under-sink knee space allows for easy access.

“cookie cutter” home. Each leg of the triangle connecting the three should be no longer than 9’ for a total of 26’ for maximum work efficiency. This is still a good rule of thumb and good basic kitchen design. However, when multiple people are cooking and mingling in the kitchen, new strategies are needed.

New kitchens are being designed larger to accommodate these concerns,

Full access storage with full extension hardware should be the order of the day throughout the kitchen for gadget access for everyone. That, after all, is the main goal of the maximum efficient and usable UD kitchen.

Common UD features to look for in most appliances are:

- Easy-to-read buttons with larger graphics and controls with contrasting colors
- Those that are intuitive and do not require complicated setup or overly involved daily operation; consider the electronic interface-intuitive functions
- Loop handles on drawers and cabinets in lieu of knobs; where knobs are preferred for electronic operation, consider shape and size
- Hardware that is easy to use, offering flexibility with little or no strength
- Advanced preprogramming options

Cleanliness Is Next to Godliness

Let's look at dishwashers and clothes washers/dryers. Specific UD features to look for in a dishwasher include:

- A balanced door with top-of-door or front-mounted and raised controls for ease of access
- Full extension racks
- A door with flexible positioning and height-adjustable components
- A smaller-capacity drawer dishwasher installed on a raised platform or under the countertop surface, allowing for smaller loads and saving water
- Control functions that accommodate right- or left-handed access and use, and controls arranged in order of importance



Drawers used to store dinnerware and cooking utensils need to be knob-free and opened using minimum strength. "Intuitive" and "uncomplicated" describe the UD kitchen.

- Controls that require low push force and minimum sustained effort
- Easy access to the in-the-door silverware basket

Front-loading washers and dryers are the easiest to access and with the common UD features noted above will serve you well as you "age in place." They are positioned side by side for staging laundry. Some great combination washer/dryers are electric and ventless and perfect for remodels or where the laundry room cannot be placed on an outside wall. Some of these even feature audible alarms that inform you when the lint filter needs to be cleaned.

You can buy most front-load washer/dryers with raised storage platforms that can range from 10 to 15 inches. The 15-inch space will store large bottles of detergents, and the 10-inch pedestals are good for wheelchair users or shorter individuals.

As we have seen, UD principles have begun to shape appliance design and will continue to do so. Many consumers may not even be aware of this trend, but according to the National Kitchen and Bath Association, 38% of

consumers are already "in the know" and considering UD elements for their homes and appliances.

Since the best universal design is meant to be invisible, we may not even know it is happening. But as the baby boomer population matures, UD will no doubt continue growing and soon be the order of the day. It will not only become basic in appliance design but also ultimately be state of the art in overall home design.

Look for more to follow next month as we look at ovens, cooktops, and energy-efficient and water-saving labels.

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