Devices to purify air, sanitize surfaces and monitor use of energy, water

NEW TECH

FOR CLEANER, SMARTER HOMES

By Sharon Jayson

MORE THAN A YEAR of living in a pandemic means we've never thought so much about health and hygiene. Being mindful of everything from the air we breathe to the surfaces we touch (or don't touch) has turned many of our homes into safe and sanitary sanctuaries.

The technology industry has noticed. Innovations in electronic devices and other tech items are streaming into the marketplace, with an emphasis on cutting-edge solutions to purify the air, clean our surroundings and refine touchless technology.

Every January, tech innovations and thousands of new products with the potential to transform lives are presented at the massive CES (formally called the Consumer Electronics Show), usually held in Las Vegas. This year's CES, produced by the Consumer Technology Association, occurred completely online. Nearly 2,000 companies unveiled products.

The first-ever digital CES showcased large and small air purifiers, voice-activated and touchless appliances with ultraviolet light sanitizers, and anti-germ gadgets galore, as well as items to monitor household water and electric use.

The Brondell Pro sanitizing air purifier is a size that can work in an office or home.

Clearing the air

Individuals with allergies or asthma are well acquainted with air purifiers, which remove particles and pollutants to improve indoor air quality. But the COVID-19 virus made air quality an obsession and purifiers are having a moment — especially ones that are more mobile, energy-efficient and effective at air filtration. HEPA air filters — long considered the industry standard — have been joined in the purifier arena by UV light and other forms of virus-disinfecting technology.

Many new air purifiers are not cheap or small and are more suited for businesses. One purifier in the in-between size and price range is the **Brondell Pro**, which lists five types of protection, including a UV disinfection lamp and a "plasma generator," which generates negative ions to eliminate microorganisms. It cleans a 538-square-foot area and is $650.

You've probably seen **3M's Filtrete** air filters for home HVAC units. The company rolled out two air purifiers — one for smaller spaces (150 square feet) for $275 and a second for larger areas (310 square feet) for $329.

Other new air purifiers are smaller and mobile. The **LG PuriCare** mini air purifier weighs in at a little over 1 pound and quietly runs for up to 8 hours on a

The small LG PuriCare air purifier can run for up to 8 hours.

FrescheAir's portable air purifier/deodorizer can fit into a vehicle's cupholder.

rechargeable battery. It can be operated via a smartphone app and costs $150. At the same price and weight is the new **Luft Duo** portable air purifier. It doesn't require a filter, cleans about 120 square feet and costs $150. The **FrescheAir** purifier fits in your your vehicle's cup holder, is motion-activated, plugs into a USB car charger and costs $100.

Touch-free appliances and disinfecting devices

Many of the top touch-free devices at CES for the kitchen and bath are pricey, such as **Kohler's Konnect touchless kitchen faucet** (voice- and motion-activated, $950), which monitors water use. It's more costly cousin, a Kohler hands-free "no-touch flush" toilet, opens and closes automatically and flushes with a wave of the hand. **Moen** has a similar "smart faucet."

Kohler touchless and voice-activated kitchen faucets respond to commands like 'fill my pot.'

Remaining in the very expensive but interesting category is an **LG refrigerator** that automatically opens and closes with voice commands, complete with UV light built into the water dispenser, at about $3,000.
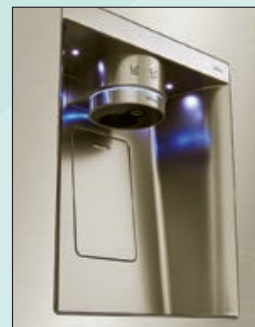
A more practically priced home device from Kohler and powered by Phyn is a DIY home water monitor that can detect leaks and tell you how much water each fixture uses. It is expected to cost about $300.

The **2Office Antimicrobial Backpack by Targus** can hold a laptop and has an antimicrobial-infused protective finish on major touch points that creates a cleaner surface to help prevent microorganism growth. There's no guarantee that it will stop the COVID-19 virus, though. It will cost about $120.

Numerous gadgets touting germ-killing UV light sanitizers showed up at CES, but consumers should read the fine print. These gentler versions of high-intensity UV-C lights used in hospitals usually require extended shine time to eliminate germs and some viruses from a surface, and there's no promise they will kill the COVID-19 virus.

While these purifying products are taking center stage, cleaner indoor air and germ-free surfaces will probably remain in demand long after pandemic fears subside.

LG's InstaView refrigerator touts 'UVnano' technology to remove bacteria from the water dispenser. *Photos courtesy of manufacturers*

The 2Office antimicrobial backpack by Targus has a protective finish to fend off germs.

It's in the details: tracking home energy use

Working and learning from home may become part of the post-pandemic lifestyle. So much home-based activity has led to increased electric use in many households, according to multiple studies. One study released earlier this year by Sense, a home energy monitoring company, found that average electric use in U.S. homes increased 9.3 percent between April and August 2020, compared with the same period in pre-pandemic 2019.

Parks Associates, a Dallas-area market research and consulting company specializing in emerging technology solutions, found 45 percent of more than 10,000 households surveyed in early 2021 adjusted their thermostats to save energy and money, and 42 percent had switched from incandescent light bulbs to CFL or LED bulbs, both more energy efficient.

One product shown at CES — the **Square D Wiser Energy smart home monitor system by Schneider Electric** — lets you track and manage home energy use. Installed (by an electrician)

into the house's electrical or breaker panel, the smart device provides (via an app) real-time energy use information for your appliances, notifications to tell you when devices are on or off, and solar panel generation (if you get an add-on). It starts at $200.