

The COVID-19 pandemic is changing the way we, as a society, move about our daily lives. According to the CDC website, while person-to-person contact is the leading cause of the spread, “it may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes.” As a result, facilities are taking a second look at how people move through their buildings and what products can help them reduce the spread of germs and bacteria.

Door hardware, especially locks, door pulls, push plates, and exit devices, are high-touch products, and it is easy to see if there are less people touching these products, there is less potential for germs and bacteria to spread. But similar to classroom barricade devices, some of the low-touch products that are coming up in conversations may not be code compliant. Door and hardware industry professionals need to help educate architects, general contractors, property management companies, and end-users in selecting product options that reduce the need to touch, yet still meet all applicable codes and standards.

The question many people are asking in this current pandemic climate is how can door openings be changed to prevent the spread of germs and bacteria? Below, are several minimal-to-no-touch door hardware solutions for common door openings used throughout various building types that can help. Many factors, including fire ratings, accessibility, and life safety, will need to be considered to determine the best solution for your specific projects.

Entry Doors

Power operators can create a completely touch-free opening, which is a smart choice for buildings that see large volumes of people (i.e., hotels, restaurants, mixed-use buildings, schools, stadiums, performing arts buildings, conference centers). Certain models of low energy power operators have an independent on-board power supply, which can power low voltage items like an electric strike or a magnetic lock.



Hager 8300 Series Low Energy Power Operator

Generally, installed above the door, a low-energy power operator behaves similarly to a door closer in that it controls the opening and closing of a door. Coupled with a touchless wave actuator, a person can use a waving motion to trigger the power operator to open the exterior door, and a sequencer can prompt the vestibule opening into the main facility.

“An alternative is using an electric latch retraction exit device in conjunction with the power operator,” explains Gordon Holmes, Product Manager at Hager Companies. “While this will not eliminate the need to touch a fully electronic system, the number of touches to door hardware is still significantly reduced.”

Power operators can also easily tie into electronic access control (EAC), where the system can be set up to remain unlocked during certain times. The actuators can be enabled or disabled, depending on the needs.

If employee entrances are always locked, they can be set up similarly to the main entrance. However, instead of a touchless actuator being used to trigger the power operator, a card reader can unlock the door and trigger the power operator, permitting touchless building access. If the doors are to be unlocked for a shift change, or other situation, this could be the same as the main entry set up and have an actuator.

In light of the COVID-19 pandemic, a unique benefit of electronic access control is the audit trail the system automatically generates as employees use their credentials to move around a building or campus, such as a school or hospital. Should an employee become symptomatic and test positive, the audit trail can quickly help identify others who may have encountered the infected person.

Corridor Doors

The most cost-effective option to reduce the spread of germs on corridor openings is to have a hold-open feature on the doors. Using door closers or mechanical hold opens at non-fire rated doors, which will keep the doors open – thus eliminating the need to touch any aspect of the door hardware. For fire-rated doors, an electromagnetic holder is needed so the doors can automatically close and latch upon the activation of the fire alarm or smoke detection system.



Batavia Elementary School - Ohio

Hospitals are an example of where electromagnetic hold opens on cross-corridor doors is an ideal solution. When visiting hours end, these doors can be set on a timer, push-button, or even tied into the electronic access control system to close and latch automatically. A school gymnasium is another example, as it is often used after hours by the public for a variety of activities. In this scenario, an electronic access control system or a digital or electronic programmable timer can lock the cross-corridor doors at a specific time, say 5:00 PM. In both examples, these options eliminate the need for staff to walk around the facility closing doors, which minimizes the number of touches to the hardware and reducing the spread of germs and bacteria.

“It’s important to note that with some electronic access control systems on the market, a building doesn’t need to have card access installed on a particular door to take full advantage of the system’s capabilities, like programming doors to open and close at certain times,” says Brian Clarke, DHT, AHC, CDT, CSI, Director of Specifications at Hager Companies. “That’s the benefit of investing in a scalable, electronic system.”

Bathroom Doors

Bathrooms have always been a place for germs to fester, which is why the inexpensive foot pull is often installed to make doors hands-free by enabling people to open the door with their foot. Another intuitive option is changing the pull design to one similar to the one below. Often used in hospitals, they can be manipulated with the arm by hooking it with the forearm or elbow (to pull).



Hager 19N Door Pull

For multi-stall restrooms that need to meet fire codes, a push/pull paddle is another option. While the need to touch the door is not eliminated as it is with a power operator, installing a push/pull latch greatly minimizes additional touches and offers new ways to open the door.



Hager 311H Push/Pull

Barrier-free restrooms are now being required by code in Canada and are becoming more common in the United States. These rooms have power-operated doors for multi-stall or power operators combined with electrified locking solutions at single-use restrooms. This will make the openings easier to navigate and increase a building’s accessibility.

Classroom and Office Doors

There has been much discussion in recent years about classroom doors, and those have mainly centered on security. We have been so concerned about active shooter incidents, and now we have another danger to our children – COVID-19. Security and touchless or minimal touch door hardware are not mutually exclusive. Solutions can be as simple as a magnetic hold open with a push-button installed at the instructor’s desk. The door can be opened to allow the flow of students between classes, and the instructor pushes the button to shut the door at the start of class.

Office and classroom doors are often not fire rated and do not require door closers. Having the ability to leave the door open and training the staff of that room to open and close the doors as required, will decrease the number of touches the doors receive and ensure that the doors are closed and locked, increasing safety and security.

Banquet, Kitchen and Breakroom Doors

These door types may experience high-traffic usage throughout the day. If a double-acting door is used a person would be able to use their foot, shoulder, or back to push their way through these doors to reduce contact with their hands.

The Cleanliness Consideration

Having a clean facility is typically a top priority for every business. Still, the current pandemic has heightened the awareness of how long germs and bacteria can remain on surfaces. Some companies have replaced their door hardware with hardware that includes an antimicrobial coating. It’s important to understand that while the antimicrobial coating is formulated with ionic silver that slows the growth of bacteria, mold, and mildew, it is not a proven solution for viruses, like COVID-19.

Clarke offers this advice, “When specifying hardware for your new construction or retrofit projects, pay particular attention to the surface of the products. Smooth products are much easier to keep clean and germ-free than grooved or fluted products.”

“Another area where germs could collect is floor stops,” notes Clarke. “Wall stops would be a cleaner option because janitorial services can clean the entire floor without hindrance—reducing the potential for germs and bacteria to collect.”



Hager 243F
Floor Stop



Hager 251W
Wall Stop

The longevity and preservation of the door hardware finish are determined by several factors – usage, climate, base metal, and the finishing process – and the protective coatings or other organic finishing applications may require different cleaning and care methods. All door hardware manufacturers provide recommended care and maintenance guidelines, which is essential to follow to keep hardware functioning properly and protect the finish.

COVID-19 has created an entirely new landscape that construction and facility professionals need to navigate. While the short term is going to challenge us to think about door openings much differently than pre-pandemic, the long-range view gives us the opportunity to educate and influence people on ways to move around buildings safer—better secured from outside threats, better protected from fire and smoke inhalation, and now minimizing the spread of germs.

