Lack of key control is one of the most significant security risks of commercial facilities. It’s also one of the most overlooked. The physical security of an access point, whether an interior or exterior door, is specifically degraded when control of the access credentials for the opening are lost or compromised. Simply put, if you can’t accurately identify—at any given point—the individuals who have access to open the locks on an opening, you have no control. With no control, anyone can duplicate a key and gain access.

Keeping your keys in control

A lack of key control

If there is not a system in place that regulates and documents the distribution of keys, then key control is an issue.

“A key system should be appropriately secured and only available to authorized individuals,” says Monte Salway, product manager of key systems at Allegion. “Additionally, every building owner or facility manager should not only limit the number of keys distributed, but also strictly control how they are issued, as well as replaced when they are lost.”

Salway says he often sees lack of key control displayed in ways not typically associated with the issue.

“Someone lending another person a key to enter a room real quick is an example of no key control,” he says. “A facility manager standing at a door for several minutes trying to find the right key for an opening is another common way that poor key control plays out.”

Both of these scenarios may seem harmless, Salway says, but they are actually indications that a building has significant security risks. They reveal that, in an emergency or threatening situation, there is no guarantee that facility and security personnel will be able to respond quickly and be assured that only authorized individuals have access.

Salway, who is also a certified master locksmith, recommends asking a few simple questions to determine if key control is an issue in your facility:

- Can you identify who has keys to the facility—and exactly what openings they have access to?
- How do you determine who should receive keys?
- How do you restrict certain areas of your facility?
- How many individuals have master keys?
- What do you do if a key is lost?
- How do you manage key blanks?
- Is there a formal process for issuing new or replacement keys?
- How are keys retrieved when there are staffing changes?
Fortifying key control with a patented key system

No matter how diligent you are in tracking your key system, all of those efforts will be undermined if a system does not utilize a key blank that is protected from duplication through some level of patent protection.

“A patented key system, like the Everest 29™ from Schlage®, is the most secure mechanical key system available,” Salway says. “Its patented nature allows the manufacturer to define—and control—the supply chain.”

Patented keys allow a manufacturer to control the supply chain for a key blank. Without an ability to control the supply chain, a key blank can be made readily available to the marketplace and offer opportunities for a key holder to make a duplicate of their key without the knowledge of the facility manager. By controlling the supply chain for how cut keys and key blanks reach the marketplace, the manufacturer and the facility can work closely in assuring that the key blanks are only provided when authorized. To be able to issue keys for a patented system, a supplier must have a contract with the manufacturer.

“With a patented system, no one can take one of your keys to a local locksmith and make a copy,” he explains. “This protects the physical security of the key and cylinder, making the accessibility of keys and key blanks much more difficult. Indirectly, this protects end users against theft and liability.”

Salway says some patented key systems also have the ability to incorporate geographic exclusivity. Schlage does that through Primus XP, which includes five additional pins in the cylinder for a unique milling on the side of the key. Each arrangement of pins is only issued once in a geographic region (based on zip code), providing an even higher level of security.

When the patent expires

When a patent expires, the keys still work. However, there is no longer any assurance around duplication and restricted access, which does expose end users to greater risk, both in terms of compromised security as well as lack of key control. However, since key systems are patented for 20 years from the date of their application filing, most end users are able to leverage the system for a significant period of time before patent expiration.

To help end users manage patent expiration and mitigate costs, most manufacturers introduce a new patented system one to two years in advance of expiration to allow end users the opportunity to migrate at a steady rate. Plus, as in the case of the Everest 29—which is patent-protected through 2029—the system incorporates features in some of the cylinders that allow it to be backwards compatible with the earlier Everest version, so those with the existing Everest system don’t have to completely change out every single lock.

If you are unsure of when the patent expires on a key system, you can either call the manufacturer or do a search via google.com/patents.

When you have no key control

Going back to the basics is the best way to regain key control. Salway advised rekeying and changing the key system—preferably to a patented key system—and developing a strict control process for how keys are issued, managed, returned and replaced. An effective key control policy should also:

- Dictate access levels that grants people certain level of keys
- Define the issuance of every key on the system, including master and grand master keys
- Set clear expectations for how employees are to manage keys in order to protect the integrity of the building’s security system
- Involve a tracking system, such as key management software like Sitemaster 200

Along with the choice of key system, Salway advises carefully selecting a provider who is going to be able to serve the system based on your facility’s needs. Willingness and ability to assist with the transition to a new key system is also important.

“For many times, the system is ordered and delivered and that is the end of the relationship,” Salway says. “I advise end users to find a provider who will, as part of their service, help you establish a plan for key distribution, swap-out and ongoing key tracking and management—this is the root of effective key control.”

For more information about key control, call 877-735-1015 or visit us at ity.vc/allegionkeycontrol.
CASE STUDY
As a U.S. port, security is a key consideration. This port needed to upgrade door hardware and improve key control and management. Not only had its key system’s patent expired, but the port was experiencing service and delivery issues with its current system and vendor. Rekeyed cylinders and keys were not provided in a timely manner—putting openings at risk. Additionally, the port had outgrown its current manual key management system and needed one that would provide real-time tracking of key distribution—by user and opening.

Additional Challenges and Considerations
- **Federal regulations:** As a U.S. port, it was subject to Homeland Security rules and regulations. Additionally, per federal guidelines, any electronic door hardware or software must be FIPS-compliant.
- **Variety of stakeholders:** The port is used by a number of stakeholders, including port tenants, U.S. customs, police, maritime and cruise ship personnel so integrating all keying and access rights by individual openings is a complex and complicated process.
- **Condensed timeline:** Because the port was using grant monies to upgrade the door hardware, the project was time-sensitive. All products had to be shipped, installed and billed by a specific date.

Solution
With the longest, patent-protected key system on the market—as well as a vetted network of supplier and locksmith partners—Allegion was the ideal partner.

Technical Expertise
In addition to sales support, Allegion provided further expertise, including:
- **Keying systems:** Allegion keying specialists analyzed 200+ openings to determine what was required at each door, gate, elevator, etc. Cylinders were being replaced with new mortise or rim cylinders, or complete cylindrical locks if mortise locks were not in place. Then, the keying team helped the port define and implement their hierarchy key system.
- **Electronics:** An electronics specialist worked closely with the port’s IT department to identify reader solutions that were FIPS-compliant and compatible with the port’s IT software.
- **Cooperative purchasing:** As an authorized manufacturer of the federal government’s Cooperative Purchasing Program, Allegion was able to guide the port in using the GSA program for purchasing both product and installation service. Because products, pricing and vendors are pre-negotiated and vetted, this program allowed the port to secure the quality, performance and service it needed for a facility of its size and regulations.

Hardware
The primary solutions chosen for the port included:
- **Schlage Primus XP 29:** Everest 29 Primus XP keyways are distributed under careful protection guidelines to protect the exclusivity of the individual side bit milling patterns. With geographic exclusivity on key blanks, the Primus XP keyway provides the highest level of keyway security.
- **SiteMaster 200:** This software provides an advanced audit trail for keys and key rings as they are created, issued, returned, lost, damaged or not yet assigned. SiteMaster 200 allows facilities to securely and efficiently manage keys, assets, hardware and personnel.
- **aptiQ™ MTK/MTK15 Readers:** With an open architecture design, aptiQ’s MTK15 Multi-Technology Single-Gang Reader Keypads are capable of interfacing with nearly any credential type. In addition to being FIPS 201-1 compliant, aptiQ readers are NFC-compatible, giving a facility the ability to upgrade to mobile credentials in the future if desired.
- **AD Series Electronic Locks** and **CO Series Standalone Locks:** With a modular design, the AD Series can be customized to fit the needs of an application now, and adapt to changes in the future without removing it from the door. Additionally, the CO Series provides the security, efficiency and convenience of electronic access control without the cost or complexity of a fully networked system.