

# Key Control Design Guide

ASSA ABLOY

Increase the Safety and Security  
of Your Facility

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ABLOY | LOCKWOOD | MEDECO

The global leader in  
door opening solutions



# Introduction

This “Key Control Design Guide” is brought to you by ASSA ABLOY, the world’s leading group of manufacturers and suppliers of locking solutions, dedicated to satisfying end-users’ needs for security and safety.

Providing key systems and associated hardware is only the beginning. For end-users to successfully enjoy the benefits of the products we produce, and to extend the life and value of a key system, proper policies must be in place. The policies and procedures suggested in this manual can play an essential part in increasing the safety and security of any building. **This manual should be used as a model or guide only.** End-users are encouraged to adopt all or part of the recommendations as appropriate to meet their individual needs.

Disclaimer: ASSA ABLOY encourages the use in whole or Part of this document but does not imply or warrant fitness for any purpose other than for reference only. Its use in whole or part is solely the decision and responsibility of the adopting facility.

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# Recommended Companion Document

## **Master Key System Design Guide and Worksheets**

In addition to establishing strong key control policies that govern the distribution and management of keys, building an effective physical master key system is crucial to achieving the desired level of security. To that end, ASSA ABLOY offers the “Master Key System Design Guide”, a comprehensive guidebook on setting up a master key system. Worksheets make it easy for the user to begin to lay out a system.

Once the process begins, it is important to rely upon an expert who can help design a secure master key system and select the right cylinder for each opening. ASSA ABLOY’s team of trained specialists will help you develop and implement an effective master key system and the appropriate key control policies. Contact your local ASSA ABLOY Australia sales team to speak with one of our specialists.

# Comprehensive Key Control Policy

## a. Purpose

1. The purpose of this Key Management Policy is to help protect the life, property and security of this building and all its occupants.
2. It shall serve as the framework by which all keys and access credentials will be managed, issued, duplicated, stored, controlled, returned, replaced and accounted for by the Key Control Authority (“KCA”)
  - 2.1 The KCA comprises the person, persons, department or committee that has authority to adopt, administer and enforce this building’s Key Management Policy.
  - 2.2 This policy shall apply to all keys including those to all space, office equipment, vehicles, padlocks, lockers, safes, etc. owned, operated or controlled by the facility.
3. This Policy seeks to establish a recorded chain of accountability and access for all credentials, keyholders and locations.
  - 3.1. Establish a key issuance authority.
  - 3.2 Issue appropriate level of keys to individuals
  - 3.3 Establish authority on all key control policies.
4. This policy seeks to implement a proper key control process and then preserve it by restoring security in a timely manner whenever key control has been threatened or compromised.

## **b. Specification**

1. This building shall use a key control system and adopt administrative policies that facilitate the enforcement of Key Management Procedures as outlined in this **Key Control Design Guide**.
2. The following represent the basic and most critical elements of key control and shall be included, **as a minimum**, in the key control specification.
  - a. Facility shall appoint a Key Control Authority and/ or Key Control Manager to implement, execute and enforce key control policies and procedures.
  - b. A policy and method of the issuing and collecting of all keys shall be implemented.
  - c. Keys and key blanks shall be stored in a locked cabinet or container, in a secured area.
  - d. A key control management program shall be utilised. A dedicated computer software application is preferred.
  - e. All keys remain the property the property of the issuing facility.
  - f. A key should be issued only to individuals who have a legitimate and official requirement for the key.
    1. A requirement for access alone, when access can be accomplished by other means (such as unlocked doors, request for entry, intercoms, timer, etc.), shall not convey automatic entitlement to a key.
  - g. All keys shall be returned and accounted for.
  - h. Employees must ensure that keys are safeguarded and properly used.

### **c. Enforcement**

1. This policy shall be adopted by universal consent and administrative mandate from the highest levels to allow full and complete implementation and enforcement.
2. All keys remain the property of the facility.
3. Keys that are no longer required for authorised purposes shall be returned to the Key Control Authority (KCA).
4. No person or department shall knowingly receive, borrow, or possess any key for any space without receiving permission from a person duly authorised to give permission to possess such key.
5. No person shall knowingly alter, duplicate, copy or make a facsimile of any key to a lock of a facility, building or property without receiving permission from the KCA.
6. To enforce effective key control, administrators may choose to impose a deposit for each key issued.
7. Keyholders shall use assigned keys for access to authorised locks only.
8. Keyholders shall take measures to protect and safeguard any facility keys issued to them or in their name.
9. Keyholders shall not loan their facility key(s).
10. Keyholders shall not use their key(s) to grant access to non-authorised individuals.
11. Keyholders shall not attempt in any manner to duplicate or alter facility keys in their possession.
12. Keyholders shall immediately report any lost, damaged, missing or stolen keys.
13. Persons entering locked buildings or spaces are responsible for re-securing all doors and shall not prop open any doors.
14. Individuals shall not store keys in desk drawers or other unsecured areas.
15. Violations of any of these enforcement policies may result in disciplinary action up to and including dismissal.

## **d. Elements of a Key Control Policy**

### **Key Control Authority – “KCA”**

1. Facility shall appoint a Key Control Authority with power and authority to:
  - a. Develop all policies and procedures related to the facility’s key management system.
  - b. Appoint or become a Key Control Manager to:
    1. Implement, execute and enforce the key control policies and procedures.
    2. Issue and return keys with proper documentation, authorisation and transaction receipts.
    3. Supervise, authorise and control the security of key and key blank storage and the key cutting process.

### **Storage**

1. Keys, credentials and key records shall be stored in a secure condition (data) or location (physical items) protected by lock and key or vault.
  - 1.1. Keys shall be stored in a locked cabinet or container, in a secured area.
  - 1.2. Key rings issued for temporary use shall be of a tamper resistant design so that keys cannot be removed from the ring prior to return.
  - 1.3. Keys stored in a non-centralised location:
    - 1.3.1. Sequence locks release one key upon the insertion and trapping of another.
      - 1.3.1. 1. Allows remote issuance of master keys.
      - 1.3.1. 2. Permits fewer master keys to be issued on a permanent basis.
    - 1.3.2. Emergency key storage boxes.
      - 1.3.2.1. Subject to local regulations and to protect against theft or duplication, no master keys should be stored in these types of containers.
    - 1.3.3. Computerised key cabinets with access control and audit capability may be used in remote locations for temporary key issuance.
  - 1.4. Key records shall be stored in a secure location that is protected against both fire and theft.
    - 1.4.1. Bitting lists
    - 1.4.2. Authorisation forms
    - 1.4.3. Key issuance and records
    - 1.4.4. Data files shall be password protected and encrypted.

# Key Management Formats

The key management system shall be maintained in either manual or computerised format:

1. The manual format shall use card and index files to easily access, maintain and cross-reference information on:

- a. Keys:
  - i. Blind code numbers.
  - ii. Standard Key Coding Symbols (SKCS)
  - iii. Key identity: serial, inventory or sequence number
  - iv. Individual with authority to issue for each key
  - v. Temporary issue keys and key rings
- b. Keyholders:
  - i. Name, address, ID#, telephone and key deposit
  - ii. Authorised individual's signatures
  - iii. Optionally: signature, photo, PIN
  - iv. Key deposit (if any)
- c. Locations:
  - i. Room Number
  - ii. Door Number
  - iii. Description of usage
  - iv. Departmental control
  - v. Security level or access restrictions
- d. Hardware:
  - i. Lockset, exit devices, deadbolts
  - ii. Cylinder type
  - iii. Door closer
  - iv. Hinges
  - v. Finish
  - vi. Protection plates (blocker plates)



2. The computerised format shall use password protected and data encrypted software to easily access, maintain and cross-reference information:
  - a. Keys:
    - i. Blind code numbers.
    - ii. Standard Key Coding Symbols (SKCS)
    - iii. Key identity: serial, inventory or sequence number
    - iv. Individual with authority to issue for each key
    - v. Temporary issue keys and key rings
  - b. Keyholders:
    - i. Name, address, ID#, telephone and key deposit
    - ii. Authorised individual's signatures
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    - ii. Cylinder type
    - iii. Door closer
    - iv. Hinges
    - v. Finish
    - vi. Protection plates (blocker plates)

## Record Keeping

1. All key records shall be kept current at all times and are to be considered high security and confidential.
2. Records shall be securely stored (see “Storage”).
3. All transactions shall be recorded in a timely manner.
4. Standardised forms shall be used (see “Forms”).

## Policies and Procedures

### 1. Identifying Keys and Keying

- 1.1. All keys should only be marked with a blind code number that does not in any way reflect its usage or level.
- 1.2. The use of standard key coding to mark cylinders or keys is not recommended.
- 1.3. Keys should not be marked M, MK, GMK, or GGMK to indicate level of keying.
- 1.4. All issued keys should contain an inventory or serial number that reflects the total number of keys issued and provides a unique identifier for every copy.
- 1.5. Keys should not be stamped with bittings.

### 2. Issuing Keys

- 2.1. All key orders should be properly authorized by an authorized signer, in addition to the keyholder, before issuing.
  - 2.1.1. Each key can have its own appropriate level of authorization.
    - 2.1.1.1. Higher level keys may require higher levels of authorization.
- 2.2. Issue the proper level key to each individual granting only the appropriate level of access.
- 2.3. Issue keys by need, not desire.
- 2.4. Require signature(s) on keyholder agreement:
  - 2.4.1. Signature of keyholder.
  - 2.4.2. Signature of authorizer.
- 2.5. Require photo ID.
- 2.6. Keys shall be issued by duration of need, not by term of employment.
- 2.7. Signature required by keyholder and authorizer.
- 2.8. Keys must be personally picked up, not mailed.
  - 2.8.1. If necessary, keys may be delivered by courier or other return-receipt-required certified carrier.

- 2.9. Keys shall be individually serialized or numbered.
  - 2.9.1. Keys shall be identified by blind code numbers and serialized number.
- 2.10. Individuals may be issued only one copy of each keyset.
  - 2.10.1. Exception for approved multiple key holders.
- 2.11. The KCA shall establish key issuance authorization levels determined by the type of key. The general rule shall be that an authorizer may only approve keys for spaces directly under his/her control. In some cases more than one authorizer may be required.
  - 2.11.1. Types of keys:
    - 2.11.1.1. Change keys.
    - 2.11.1.2. Master keys.
    - 2.11.1.3. Grand master keys.
    - 2.11.1.4. Top master key.
    - 2.11.1.5. Entrance key.
    - 2.11.1.6. Control keys.
    - 2.11.1.7. Mechanical/Maintenance keys.
    - 2.11.1.8. SKD/Security keys.
- 2.12. Facility shall use standardized key deposits varying by keyholder type and by level of key. For example, the deposit for a master key should be greater than that of a change key.
- 2.13. Keys may not be duplicated or issued except through the KCA or authorized facility locksmith.
- 2.14. Keys shall only be issued by a designated individual.
  - 2.14.1. Exception: electronic key cabinets with audit control or sequence locks.
- 2.15. All keys should be tracked with a return due date and time, especially temporary issue keys.
- 2.16. Shift keys or rings shall be returned at the end of every work shift.
- 2.17. Shift key rings shall be sealed and tamper evident.

### 3. Returning Keys

- 3.1. All keys shall be returned to the issuing department by the authorized keyholder.
  - 3.1.1. When keys are returned, any key deposit will be refunded and a key return receipt shall be issued to the keyholder.
- 3.2. Found keys must be turned into the KCA.
- 3.3. Final paychecks, records, and/or transcripts may be held pending return of key(s).

#### 4. Non-returned key policy

- 4.1. A fee for lost or stolen keys shall be established.
  - 4.1.1. In the event that facility keys are lost or stolen, it shall be policy to recombine immediately any cylinders accessible by the lost key(s).
  - 4.1.2. All re-keying charges must be paid by department, individual, or company responsible for losing the key.
  - 4.1.3. Rekeying charges shall be determined by the number of locks operated by the lost or stolen key(s).
  - 4.1.4. If any individual has two or more separate incidents of lost, stolen, or nonreturned key violations within a one-year period, key privileges may be revoked.

#### 5. Administration of the Master Key System

- 5.1. Update the key schedule and bitting lists as new codes and bittings are issued and used.
  - 5.1.1. Send periodic updates to the cylinder manufacturer if factory control over the key system will continue.
- 5.2. Cross keyed conditions should be minimized or avoided.
  - 5.2.1. When cross keying is unavoidable, all cross keyed conditions should be fully recorded.

#### 6. Audits

- 6.1. Keyholder:
  - 6.1.1. On at least an annual basis, the responsible department will determine that the proper accountability of keys is being maintained by conducting random key checks that sample the keys being carried by at least 25% of all departmental keyholders.
- 6.2. Key System:
  - 6.2.1. It is recommended that, under normal circumstances, all keys and cylinders should be changed, or at least evaluated for change, at intervals not exceeding five years.
  - 6.2.2. Perform periodic audits of key cutters to determine if unauthorized duplicate keys can be obtained.
- 6.3. Reports shall be periodically generated and distributed by department with a written response required to confirm the accuracy of the information being held.

#### 7. Transfer/Temporary use

- 7.1. Keys shall not be transferred from one individual to another without proper authorization and record keeping from the KCA.

## Forms

It is highly recommended that forms be developed to document all key transactions. The following represents basic elements that should be included in one or more of each type of form — *See example next page.*

1. Key Request Form
  - 1.1. Key request:
    - 1.1.1. One form for one key.
    - 1.1.2. Issue multiple forms for multiple keys.
  - 1.2. Key issue agreement.
  - 1.3. Keyholder signature.
  - 1.4. Authorization signature.
  - 1.5. Work order.
  - 1.6. Key issue and deposit receipt.
  - 1.7. Multiple keyholder request.
2. Key Return Form
  - 2.1. Key return receipt.
  - 2.2. Deposit return receipt.
3. Lost or Stolen Key Report Form
  - 3.1. Description of circumstances of loss.
  - 3.2. Rekey fee if any.
4. Service Form
  - 4.1. Cylinder recombination form.
  - 4.2. Request for SKD or NMK keying.
  - 4.3. Lock opening request form.

*The following basic information should be included on each form.*

1. Key holder name, address, ID and/or department.
2. Signature of key holder and date.
3. Key identification (key set symbol and/or blind code).
4. Location where key(s) are needed.
5. Type of transaction; issue, return, lost or stolen, cylinder recombination, or lock opening request.
6. Authorization signature(s).
7. Date of specific transaction(s).

# Key Request Form

(Use one form for each key only)

Name \_\_\_\_\_  
Employee ID# \_\_\_\_\_ Phone \_\_\_\_\_  
Key# \_\_\_\_\_ Key Symbol \_\_\_\_\_ Copy# \_\_\_\_\_ Mfg# \_\_\_\_\_  
Key Location(s) \_\_\_\_\_

**Key Issue Agreement:** In return for the loan of this key, I agree: **1)** not to give or loan the key to others; **2)** not to make any attempts to copy, alter, duplicate, or reproduce the key; **3)** to use the key for authorized purposes only; **4)** to safeguard and store the key securely; **5)** to immediately report any lost or stolen keys; **6)** produce or surrender the key upon official request. I also agree that if the key is lost, stolen, or not surrendered when requested a charge that reflects the cost of changing any and all locks affected may be assessed.

<p><b>KEY RETURN:</b> RETURN DATE _____ BY _____ RETURN REASON _____ _____ <b>DEPOSIT RETURN</b> _____ <b>KEY NOT RETURNED:</b> <input type="checkbox"/> LOST <input type="checkbox"/> STOLEN <input type="checkbox"/> BROKEN <input type="checkbox"/> OTHER <b>EXPLAIN CIRCUMSTANCES:</b> _____ _____ <b>SIGNATURE RECEIPT</b> _____ BY _____</p>
--

Signature \_\_\_\_\_ Date \_\_\_\_\_

Deposit \_\_\_\_\_

Issue Type:  Standard  
 Temporary Due Date \_\_\_\_\_  
 Reissue Reason \_\_\_\_\_

Authorizer's Signature \_\_\_\_\_ Date \_\_\_\_\_

Print Name \_\_\_\_\_

Title \_\_\_\_\_

Phone \_\_\_\_\_

# Servicing

## 1. Cutting keys:

1.1. Only a facility-approved locksmith shall be permitted to cut keys.

1.2. All facility keys shall be cut on factory approved code cutting machines, not on duplicating machines that trace from one key to another. Duplicating machines are less accurate and can transfer wear or inaccuracy that worsens through generations of keys.

## 2. Pinning/recombining cylinders:

2.1. Shall only be performed by facility-approved locksmith department.

2.2. Shall be on the facility's key system unless approved by KCA.

2.2.1. Combine to all appropriate levels of keying unless pre-approved by KCA.

2.2.2. SKD combinations must be pre-approved by KCA.

## 3. Installing locks:

3.1. Shall only be performed by facility-approved locksmith department.

3.2. Shall be on facility's key system unless approved by KCA.

## 4. Preventative maintenance shall be performed regularly to ensure proper operation of keys and locks and to maintain security.

4.1. Worn keys shall be replaced to avoid breakage.

4.2. Worn or poorly functioning cylinders shall be replaced to maintain proper security.

4.3. All facility key machines shall be checked and calibrated regularly, at least on a monthly basis.

## 5. Locksmithing work shall only be performed by:

5.1. An in-house locksmith department, or

5.2. A facility-approved outside locksmith business.

# Condensed Model Key Control Policy

*The following is to be used as a guide for developing a key control policy, and to assist in the understanding of how a formalized key control policy should be formatted. When used in conjunction with the Key Control Policy Elements of ASSA ABLOY's Key Control Design Guide, this sample key control policy can be tailored to meet a facility's specific key management objectives.*

## Purpose

The purpose of this Key Control Policy is to help protect the life, property, and security of this facility and all its occupants.

## Specification

This facility shall use a key control system and administrative policies that facilitate the adoption and enforcement of this Key Control Policy.

## General

The introduction of a key control policy is essential for the security of this facility and the protection of personnel, property, and equipment.

Facility shall appoint a Key Control Authority with power and authority to: develop all policies and procedures related to the facility's key management system; and, appoint or become the Key Control Manager to execute and enforce key control policies and procedures.

The Locksmith (internal or contracted service), unless otherwise directed, is responsible for making keys, installing and maintaining locks and cylinders.

No person shall knowingly alter, duplicate, copy, or make a facsimile of any key to a lock of a building or property thereof without receiving permission from a person duly authorized.

## Key Control

The Key Control Authority will determine appropriate policy and method for the issuing and collecting of all keys.

All keys shall be stored in a secured locked cabinet.

The Key Control Authority shall utilize an effective key control management program and assign the appropriate individual(s) to maintain its use.

To facilitate effective key control, the Key Control Authority may impose a nominal key deposit.



# Policy and Procedures

## **Issuing of Keys**

All keys remain the property of (Insert name of facility).

All keys shall be properly authorized by signature before issuing, and shall only be issued by a designated individual.

The process for which keys shall be issued will be based on defined policies and procedure as set forth by the Key Control Authority.

Keys should be issued only to individuals who have a legitimate need for the key. The number of master keys issued should be limited.

## **Returning Keys**

All keys shall be returned to the issuing department by the keyholder of record.

All lost keys shall be reported immediately to the Key Control Authority. It shall be the facility's policy that when keys are lost or stolen, to recombine immediately any cylinders accessed by the lost keys.

All found keys shall be returned to the Key Control Authority.

## **Employee Responsibilities**

Employees shall only use their keys to access their assigned work areas and should lock doors when leaving any secured area. Employees must also ensure that keys are safeguarded and properly used.

The unauthorized possession, use or reproduction of a key may constitute theft or misappropriation. Any employee who violates this policy may be subject to disciplinary action.

# Specific Applications

## a. Educational P-12

Following are specific examples of additional elements that should be considered when tailoring a key control policy for Educational, P-12 facilities:

1. P-12 facilities require heightened lock and key management to protect a highly vulnerable population of students and staff.
  - 1.1. Any policy must restrict the distribution and ensure the retrieval of keys.
  - 1.2. Access through entrance doors must be tightly controlled.
  - 1.3. Threats: drugs, kidnapping, vandalism, terrorism, violence, abuse.
2. Lockdown conditions and procedures.
3. Limited school year with extended periods of vacation or closure that require return of keys or lock-out of many keyholders.
4. Community usage and access requirements:
  - 4.1. Special access authorization requirements.
  - 4.2. Special requirements for unlocking requests.
5. A school district may have many buildings, often spread over a wide geographical area.
  - 5.1. This may require special considerations for service, remote key duplication and issuance.
6. Unique types of keyholders:
  - 6.1. Teachers.
    - 6.1.1. Keys should normally be returned at end of academic year.
  - 6.2. Substitute teachers.
    - 6.2.1. Temporary issued keys.
  - 6.3. Administration.
  - 6.4. Maintenance/Service/Security.
7. Administered by local government and subject to state, federal, and local laws.

## b. Healthcare Facilities

Following are specific examples of additional elements that should be considered when tailoring a key control policy for Healthcare facilities.

Healthcare facilities, including hospitals, clinics, and nursing homes provide unique demands upon a key system. Facilities protecting a more vulnerable population, such as children, the sick or infirm, the aged, those with infectious diseases, those susceptible to infection, or those with mental impairment, even including the criminally insane, can present a diverse set of needs.

Some of those considerations are:

1. Healthcare facilities (“HCF’s”) may require a strong KCA that can enforce key issuance and return policies despite the strong needs and powerful personalities of doctors and administrators.
2. HCF’s have different departments with varying security needs:
  - 2.1. Obstetrics.
  - 2.2. Paediatric wards.
  - 2.3. Psychiatric detention areas.
  - 2.4. Infectious disease areas.
  - 2.5. Emergency rooms.
  - 2.6. Elderly care with anti-wandering requirements.
  - 2.7. Unique elevator controls.
  - 2.8. Pharmacy: storage and dispensary.
  - 2.9. Security department with full access abilities.
  - 2.10. Custodial and cleaning staff must have full access to keep high sanitation standards.
  - 2.11. Radiology.
  - 2.12. Laboratories.
3. HCF’s often allow free access, 24x7x365, to visitors and attendants, but still require a high degree of control within the building itself.
4. An HCF may have many buildings united under one key system.
5. Unique types of Keyholders:
  - 5.1. Doctors.
  - 5.2. Nurses.
  - 5.3. Administrators.
  - 5.4. Maintenance and technicians.
  - 5.5. Cleaning supervisors.
  - 5.6. Security.
  - 5.7. Temporary staff with high turnover.
  - 5.8. Outside contractors.
  - 5.9. Researchers.
6. Unique accreditation and federal, state and local government inspection and legal requirements.

## c. Colleges and Universities

Following are specific examples of additional elements that should be considered when tailoring a key control policy for colleges and universities.

1. Colleges and universities require heightened security measures in lock and key management to protect a highly vulnerable population of faculty, staff and students.
  - 1.1. Any policy must restrict the distribution and ensure the retrieval of keys.
  - 1.2. The key control policy must properly blend the needs of the physical security locking system with other access control measures.
  - 1.3. Different security needs for academic buildings, housing—undergraduate and graduate, on-campus and off-campus—administrative, physical plant, and other outside contracted services must also be considered in the key control policy.
  - 1.4. Threats: theft, vandalism, terrorism, violence, student pranks, protesters.
2. Colleges and universities may have many different department types and usages with varying requirements. They may include:
  - 2.1. Academic.
  - 2.2. Dormitories and Commons (or simply Housing).
  - 2.3. Athletics.
  - 2.4. Real Estate.
  - 2.5. Apartments.
  - 2.6. Hotels and lodging.
  - 2.7. Physical Plant.
  - 2.8. Government and industry research laboratories.
3. Standard school year calendar with extended breaks or closure that require return of keys or lock-out of keyholders.
4. Community usage and access requirements:
  - 4.1. Special access authorization requirements.
  - 4.2. Special requirements for unlocking requests.
5. Types of Keyholders:
  - 5.1. Administrators.
  - 5.2. Staff.
  - 5.3. Professors.
  - 5.4. Maintenance and security.
  - 5.5. Students.
    - 5.5.1. Keys should normally be returned at end of academic year, or during periods of lock out.
  - 5.6. Contracted services.
    - 5.6.1. Temporary issued keys, to be returned as specified
  - 5.7. Researchers.

## d. Office Buildings

The following are examples of additional elements that should be considered when tailoring a key control policy for Office Buildings.

1. Administration of tenant space v. core space.
  - 1.1. Tenant space belongs to the office and retail occupants of a building and can change regularly both in size, structure and composition.
  - 1.2. Core space is the backbone or support area of a building represented by private mechanical, electrical, communications, janitorial, roof as well as public areas such as stairwells, lobbies, shipping and loading areas, parking areas, etc.
2. Tenants often request or insist upon their own key system and key management procedures managed independently from building management.
  - 2.1. Each tenant may have its own KCA or should use one provided by building management.
3. Administration and structure of keys and key system are often designed by floor and may or may not overlap with the structure of tenant usage.
4. High traffic flow of public non-keyholders during the day (though more and more may be required to be escorted or identified first), versus very limited access after hours.
5. Vacant or unoccupied space.
6. High rate of change and redesign of the key system with tenant turnover.

# Glossary

This glossary relates to ASSA ABLOY Australia key systems education and should not be considered universal. Cylinder and Keying terminology has evolved over many years and while it is generally understood by those conversant with lock and key hardware, the accompanying glossary may assist to clarify any areas of doubt.

1. Terms and definitions are to be reprinted in their entirety.
2. Credit is to be given to Australian Standard AS 4145.1-2008, (Locksets and hardware for doors and windows).

## ACCESS CONTROL

The means by influencing and regulating the flow of persons through a doorway

## ALL – SECTION KEY BLANK

The key section that enters all keyways of a multiplex system.

## AUTHORIZED KEY CUTTER

A business or person authorized by the lock cylinder manufacturer or agent to cut or bit that manufacturer's or agent's restricted keys.

## BARREL

See plug

## BITTED KEY

Generally means a cut key.

## BITTING

1. The number(s) that represent(s) the dimensions of the key.
2. The actual cut(s) or combination of a key.

## BITTING LIST

A listing of all the key combinations used within a system. The combinations are usually arranged in order of the Bottom Pins and Master Pins.

## BOW

The portion of the key that serves as a grip or handle.

## BROACH

A tool used to cut the keyway into a cylinder plug or barrel. A term also used for the keyway shape.

## BUMPING

One of many methods used to open locks with the use of "bump keys" that leave no sign of physical attack.

## CAM

A rotating lever attached to the end of the cylinder plug to activate the lock mechanism.

## CHANGE KEY

See servant key

## COMBINATE

To set a combination in a lock, cylinder, or key.

## CONSTRUCTION CYLINDER

Temporary keyed cylinders installed during construction, removed and replaced with final keyed cylinders after construction is complete. This system ensures that keys used during construction cannot operate after final cylinders are installed.

## CONSTRUCTION KEYING

Alternative method to a construction cylinder where the keyed cylinders are supplied with a construction key system when it is removed prior to building completion by the insertion of the owner key or by the removal of a split key plug.

## CONSTRUCTION MASTER KEY (CMK)

A key normally used by construction personnel for a temporary period during building construction. It may be rendered permanently inoperative without disassembling the cylinder.

## CONTROLLED CROSS KEYING

A condition in which two or more different keys of the same level of keying and under the same higher level key(s) operate one cylinder by design. *Note: This condition could severely limit the security of the cylinder and the maximum expansion of the system when (1) more than a few of these different keys operate a cylinder, or (2) more than a few differently cross keyed cylinders per system are required.*

## CREDENTIAL

See Change Key

## CROSS KEYING

The process of combining a cylinder (usually in a master key system) to two or more different keys which would not normally be expected to operate it together. See also "controlled cross keying" and "uncontrolled cross keying."

## CUT KEY

A key that has been bitted or combined.

## CYLINDER

The assembly incorporating the key-operated mechanism.

## CYLINDER CORE

See plug

# Glossary

## **DIFFERS**

The variation between locks of similar design, which allow each lock to be operated only by its own key.

## **DIRECT KEY CODING**

A code marked on a key or locks which, with no reference to another series of codes, discloses the key cuts for creating a workable key.

## **DISC**

See tumbler

## **DOUBLE-BITTED KEY**

A key having bittings or cuts on two sides to actuate the tumblers of the lock.

## **DUMMY CYLINDER**

A non-functional facsimile of a rim or mortise cylinder used for appearance only, usually to conceal a cylinder hole.

## **EFFECTIVE DIFFER**

Difference between key mechanisms of similar design, achieved only by the movable retainers, which allows each key mechanism to be operated only by its own key. The number of effective differs is equal to the number of theoretical after deduction of the undesirables, suppressed by the manufacturer due to technical constraints.

## **GRAND MASTER KEY (GMK)**

A key, within a system, that operates all locks in a number of separate groups that have their own Master keys.

## **GREAT GRAND MASTER KEY (GGMK)**

The same as GMK but usually consisting of more than one GMK group, which are then controlled by one GGMK key.

## **GUEST KEY**

A hotel/ motel room key that is used by a guest, usually keyed to differ under a master key group.

## **HIGH SECURITY CYLINDER**

A cylinder that offers a greater degree of resistance to any two or more of the following: picking, impressioning, key duplication, drilling or other forms of forcible entry.

## **HOUSING CYLINDER**

The part of a locking device that is designated to hold a core.

## **IMPRESSIONING**

A method of determining the key cuts, using a key blank or similar device, inserted in the keyway.

## **INDIRECT KEY CODING**

A code marked on a key or lock, which requires reference to another series of codes to disclose the key cuts for creating a workable key.

## **INDIVIDUALLY KEYED**

See keyed to differ

## **KEY**

The device that is intended to activate the lock mechanism or cylinder.

## **KEY BIT**

Generally a cut in a key.

## **KEY BITTING ARRAY (KBA)**

A matrix (graphic) display of all possible bittings for change keys and master keys as related to the top master key.

## **KEY BLANK**

An uncut key.

## **KEY CABINET**

A cabinet with hooks, Velcro®, or other means designed to store keys systematically.

## **KEY CHANGES**

The number of differs available within a key system.

## **KEY CODE**

A record of key bitting.

## **KEY CONTROL**

1. Any method or procedure that limits unauthorized acquisition of a key and/or controls distribution of authorized keys.
2. A systematic organization of keys and key records.

## **KEY INTERCHANGE**

An undesirable condition, usually in a master key system, whereby a key unintentionally operates a cylinder or lock.

## **KEY PROFILE**

The shape of the cross-section of the key that matches the broach.

## **KEY SECTION**

The exact cross sectional configuration of a key blade as viewed from the bow toward the tip.

## **KEY SYMBOL**

A designation used for a key combination in the standard key coding system, e.g. GMK, MK, 1-1, etc.

## **KEY SYSTEM**

See maison key system, master key system and profile key system.

## **KEY SYSTEM SCHEMATIC**

A drawing with blocks utilizing keying symbols, usually illustrating the hierarchy of all keys within a master key system. It indicates the structure and total expansion of the system.

# Glossary

## KEYED ALIKE (KA)

Indicates identical key for two or more locks.

## KEYED DIFFERENT (KD)

Of or pertaining to a group of locks or cylinders, each of which is or is to be combined differently from the others. They may or may not be part of a keying system.

## KEYED TO DIFFER

Indicates that a different key is needed to activate each lock.

## KEYED UNLOCKABLE

Indicates that the locking operation is activated without the aid of a key and the unlocking operation is performed by a key.

## KEYWAY

The opening in the plug that is shaped to accept a key blade of proper configuration.

## KEYING

Any specification for how a cylinder or group of cylinders are or are to be combined in order to control access.

## KEYING CONFERENCE

A meeting of the end-user and the keying system supplier at which the keying and levels of keying, including future expansion, are determined and specified.

## KEYING SCHEDULE

A detailed specification of the keying system listing how all cylinders are to be keyed and the quantities, markings, and shipping instructions of all keys and/or cylinders to be provided.

## KEYWAY

1. The opening in a lock or cylinder that is shaped to accept the key bit or blade of a proper configuration.
2. The exact cross sectional configuration of a keyway as viewed from the front. It is not necessarily the same as the key section.

## LEVELS OF KEYING

The divisions of a master key system into hierarchies of access, as shown on page 5.

## LOCK SYSTEM

See key system.

## MAISON KEY SYSTEM

A keying system where a group of different keys will operate a common lock.

## MASTER KEY

1. A key that operates all the master keyed locks or cylinders in a group, each lock or cylinder usually operated by its own change key.
2. To combine a group of locks or cylinders such that each is operated by its own change key as well as by a master key for the entire group.

## MASTER KEY SYSTEM

A system where locks are passed by two levels of keys. The lower level of key (keyed to differ) fits only that lock or those locks keyed alike. The higher level (master key) fits all locks in the system.

## MASTER KEYED

Of or pertaining to a cylinder or group of cylinders that are or are to be combined so that all may be operated by their own change key(s) and by additional key(s) known as master key(s).

## MULTI PROFILE KEY SYSTEM

1. A series of different key sections that may be used to expand a master key system by repeating bittings on additional key sections. The keys of one key section will not enter the keyway of another key section. This type of system always includes another key section that will enter more than one, or all of the keyways.
2. A keying system that uses such keyways and key sections.

## PATTERN KEY

1. An original key kept on file to use in a key duplicating machine when additional keys are required.
2. Any key that is used in a key duplicating machine to create a duplicate key.

## PIN TUMBLER

Usually a cylindrical shaped tumbler. Three types are normally used: bottom pin, master pin and top pin.

## PLUG / BARREL

The part of a cylinder that contains the keyway, with tumbler chambers usually corresponding to those in the cylinder shell.

## PROFILE KEY SYSTEM

See multi-element profile key system.

## PROJECT KEYING

See construction keying.

## RESTRICTED KEY

A key that can only be obtained through an authorization system.

## RESTRICTED PROFILES

Key profiles and broaches that are generally used in special keying systems and are often the subject of registered design.



# Glossary

## SELECTIVE MASTER KEY

An unassociated master key that can be made to operate any specific lock(s) in the entire system in addition to the regular master key(s) and/or change key(s) for the cylinder without creating key interchange. Examples include:

- (ENG) Engineering key
- (SEC) Security key

## SERVANT KEY

The individual key to a lock in a master key system.

## SERVICE KEY

See servant key.

## SERVICES KEY

A servant key used to operate a number of locks (e.g. locks for fire services, building services or emergency services).

## SHEAR LINE

A location in a cylinder at which specific tumbler surfaces must be aligned, removing obstruction(s) that prevent the plug from moving.

## SHELL / HOUSING

The part of the cylinder that surrounds the plug and usually contains tumbler chambers corresponding to those in the plug.

## SINGLE KEY SECTION

An individual key section which can be used in a multiprofile key system.

## SIGNATORY

The person (or persons) who controls and manages the key system.

## SPOOL PIN

A double ended mushroom pin.

## SKD

Abbreviation for "single keyed", normally followed by a numerical designation in the standard key coding system, e.g., SKD1, SKD2, etc. It indicates that a cylinder or lock is not master keyed but is part of the keying system.

## STANDARD KEY CODING SYSTEM

An industry standard and uniform method of designating all keys and/or cylinders in a master key system. The designation automatically indicates the exact function and keying level of each key and/or cylinder in the system, usually without further explanation.

## SURREPTITIOUS ENTRY

The use of entry or bypass techniques that cannot be detected via disassembly and detailed inspection of lock components, eg. bumping.

## TAILPIECE

An actuator attached to the rear of the cylinder, parallel to the plug, typically used on rim, key-in-knob or special application cylinders.

## TOP PIN

The upper pins in a pin tumbler cylinder.

## TRACEABLE KEY

Also referred to as a restricted key. A key that is identifiable as part of a restricted key system. It is marked with a system number, a ranking and an issue number.

## TUMBLER

A component of a lock or cylinder that prevents operation of the lock mechanism, except with insertion of the correct key. Tumbler may take the form of pins, discs, levers, bars, wafer or retainers.

## UNCONTROLLED CROSS KEYING

A condition in which two or more different change keys under different higher level keys operate one cylinder: e.g., X1-1-01, OB (operated by) MK1, 1-1.\* *Note: This condition severely limits the security of the cylinder and the maximum expansion of the system, and often leads to key interchange.*

## VISUAL KEY CONTROL (VKC)

A specification that all keys and the visible portion of the front of all lock cylinders be stamped with standard keying symbols.

## WAFFER

See tumbler.

## X

Symbol used in hardware schedules to indicate a cross-keyed condition for a particular cylinder, e.g. X1-1-01, OB (operated by) 1-1-1, 1-1-2, MK1, GMK.

## ZERO BITTED

Of or pertaining to a cylinder which is or is to be combined to keys cut to the manufacturer's reference number "0" bitting.

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