

# Designing Master Key Systems

# Cylinders and Keys

## Key Systems

### Step 1

#### Determine the type of locking system

- Conventional "open & restricted keyways"
  - Not contract controlled
- Patented locking system
  - A notice of acceptance will be required between Corbin Russwin and Owner
  - Factory-based system
  - Key blank distribution restrictions are in place
- Security (secondary locking mechanisms, example; Pyramid Security)
- High security (same as Security plus UL437 – example; Pyramid High Security)
- Standalone access control locking devices (at door wiring, example; Access 800)
  - To facilitate multiple users through common doors
- Integrated locking systems (hard wired into access control systems)

### Step 2

#### Establish the level of the master key system. The higher the level the less secure.

- Level two – "Simple Master Key system"
  - Change key, and master key only
- Level three – "Grand Master Key system"
  - Change key, master key, and Grand Master Key
- Level four – "Great Grand Master Key system"
  - Change key, master key, Grand Master Key, and Great Grand Master Key
- Levels higher than four are not recommended for security reasons
  - With more levels, additional master pins in each chamber of the cylinder would be required, and with the additional master pins the possibility of unauthorized key interchanges could occur

\*See pages 50-52 on How to Establish Key Systems.\*

### Step 3

#### Establish key hierarchy, key issuing policies and procedures, and administrative disciplines.

- Who, if anyone is authorized to carry the top master key?
- Who carries master keys and change keys?
  - Does every employee receive a key?

- What disciplinary action(s) is being put in place for violations?
  - Fines or Deposits
    - > Lost keys
    - > Keys not returned
  - Will there be a key receipt required?
    - > Where will that be kept?
- Who is the systems administrator?
  - Authorized to purchase
  - Responsible for Key Control Administration
- Who is the Key Control Administrator?
  - Maintain key control software & all transactions

### Step 4

#### System Layout

- Helpful Hints
  - KISS "Keep It Simple System"
    - > Do not use the term sub-master (not unless it's level 6 and higher)
- Lowest level possible
- Key to the building security objectives NOT to the people
  - Determine if the system is to be designed for Security or Convenience
- No cross keying, especially with patented locking systems and higher
- Key alike within master key groups as much as possible
  - Avoid top-heavy systems (example; few change keys used under masters)
- Has the right function of lockset been selected?
  - Storeroom vs. Classroom vs. Entry
  - Single cylinder vs. double cylinder
    - > If double cylinder, how is the inside cylinder to be keyed?
- Provide adequate quantity of keys
  - Top Master keys "limit the number of these to only a few"
  - Master keys "also limit the number these"
  - Change keys per key set and/or per keyed alike sets
  - Special operating keys
    - > Control keys "limit the number of these"

#### Separate the internal departments into sectors, example are:

- Perimeter
  - Including all exterior doors, roof surfaces, gates and fences, and adjacent buildings.
- Operations
  - Sensitive areas crucial to daily operations, such as plant engineering, security and mechanical operations.

- Management
  - Areas that are vital for daily business activities, primarily human resources, administration, executive offices, IT, sales, and accounting.
- Services
  - Areas that provide employees and visitors with services, such as restrooms, medical treatment areas, housekeeping, food service, retail (unless it's a leased outside source).
- Unique Applications
  - Door openings requiring access control hardware where key override is required, or any other special application which would be unique.
- Tenants
  - Any tenants that are not part of the building.

### Step 5

#### Servicing & Maintenance

- In-house or outside locksmith
  - Ensure proper training
  - Establish key cutting log
  - Establish service request procedures
- Service equipment
  - Key kit
  - Code cutter that complies with systems depths & spacing specifications
  - Locksmithing tools, fixtures & accessories
- Establish stock levels & requirements to avoid misuse of multi-section key blanks
  - Additional cylinders ready for emergencies
  - Additional key blanks (of all keyways)
- Who or where are the key blanks going to be kept?
- Who is authorized to cut keys?
  - What form of work order will be used to authorize cutting of keys?
  - Who will sign the work order?
  - What records will be kept & where?
- What type of reports will be required?
  - Overdue keys
  - Miss-cut keys
    - > Who receives the reports?
- Once a key has been cut, what instructions are given to the recipient?
  - Key receipt recommended
- Ensure that all transactions are recorded by the Key Control Administrator
- ENFORCEMENT FROM THE START! SUPPORT AND BACK THOSE WHO ARE RESPONSIBLE FOR MAINTAINING AND SERVICING THE SYSTEM.

# Key Wizard®

## Key Systems

### Key Management Software

#### Advantages

A key management software program is essential for any type of organization. Keeping track of the key holders in a master key system is critical for maintaining key control and ensuring the security and integrity of the system. *Key Wizard* by Corbin Russwin was designed to provide a user-friendly tool for facility end users to track detailed information concerning their keying system. It offers improvements over existing key management software by utilizing clutter-free and easily navigated screens. This system uses a Microsoft®

Outlook® type of layout.

Key control for a facility is maintained by adopting a complete system of policies, procedures, record keeping and specialized products. A comprehensive key management software program is one aspect of a complete key control system.

*Key Wizard* by Corbin Russwin provides the facility with accurate information concerning keys, key holders, hardware locations, master key systems, overdue keys and maintenance service schedules, all of which can be customized.



#### Features:

- Free technical support and free software upgrades for one year
- Customized query, report and search capability
- Comprehensive hardware listings for door locations
- Displays key holder photos and signatures for verification
- Clear, easy to read screens
- Automatic reminders for maintenance, back-ups and overdue keys
- Network and standalone versions available
- Accurate key symbol sorting
- Audit trail tracks changes made to keyholders
- Printing of door number labels to ensure proper cylinder installation
- Key authorization tracking
- Customized key receipts and authorization forms
- Tracking of loaned keys and key deposits
- Stores maintenance service history records
- Can manage multiple end users and multiple key systems for most manufacturers
- Importing of key systems, keyholders and locations
- Exporting of key systems and locations
- Global key search across multiple master key systems
- Multi-level password protection
- Download of key bittings to ITL9700 Code machine
- Pinning Calculators

#### Computer System Requirements:

- 500 MHz processor or greater
- Windows 98, 2000, ME, NT, XP, Vista, 7, or 10
- 64 MB RAM
- 70 MB hard disk space

#### Demo Version

Demo versions are available. Demos can be downloaded from the Corbin Russwin website at <http://www.corbinrusswin.com> or [www.keywizard.net](http://www.keywizard.net)

#### How to Order:

All *Key Wizard* programs are licensed specifically to each facility end user. Special online ordering procedures apply. The following information is required for each system:

End User Facility Name  
End User Contact Individual  
Mailing Address  
Phone Number

#### Key Wizard Technical Support:

1-800-610-1706

# How to Order Cylinders

# Numbering Scheme Overview

## Key Systems

10	0	0	-	118	-	A01	-	6	-	L4	-	Finish x Options*
Cylinder Type		Mechanism	Function	Length		Cam		Pins	Keyway			
10	Mortise	0 Standard	0 Standard	(Mortise Cylinder) Non-IC		A01	Cloverleaf	6 Standard	752			
11	Flex Head Mortise	1 Security	1 Hotel	100	1" (25mm)	A02	Straight	7	852			
12	Concealed Shell Mortise	2 Pyramid	2 Blockout	118	1-1/8" (29 mm)	A03	Adams Rite® MS		981			
13	Thumbturn Mortise	3 IC Pyramid	3 Classroom	114	1-1/4" (32 mm)	A04	DL4000 Series		A			
14	Dummy Mortise	Cylinder (LFIC)	4 Brink CW	138	1-3/8" (35 mm)	A05	Adams Rite 4070		DH			
15	Access 3 Mortise - AP	4 SFIC Housing	5 Brink CCW	112	1-1/2" (38 mm)	A06	Schlage® Cloverleaf		N			
16	Access 3 Mortise - AS	6 Master Ring	6 Obsolete	134	1-3/4" (44mm)	A07	DL4100 Series		X			
17	Access 3 Mortise - AHS	7 LFIC Housing	Crossbar ED6200	200	2" (51 mm)	A61	New MR Cloverleaf-locks made after 5/93		Z			
20	Knob/Lever	8 IC Complete	7 Pyramid Security	214	2-1/4" (57 mm)	A62	MR Straight		Access 3			
21	Continental Knob	9 IC Security	8 UL IC Housing	212	2-1/2" (64 mm)	A63	Large MR Short		Pyramid			
22	Competitor Knob/Lever	Cylinder (LFIC)	Access 3	234	2-3/4" (70 mm)	A64	Large MR Long					
23	Access 3 Competitor Knob/Lever			300	3" (76 mm)	A65	Old MR Cloverleaf -locks made prior to 5/93					
24	Competitor Keyways			314	3-1/4" (83 mm)	A92	Exit Grip Trim 01, 02					
25	Access 3 KIK/KIL - AP			312	3-1/2" (89 mm)	A93	Obsolete Deadlocks: Corbin® 610 Series and Russwin® 1403 Series					
26	Access 3 KIK/KIL - AS			334	3-3/4" (95 mm)							
27	Access 3 KIK/KIL - AHS			(Mortise Cylinders) IC								
28	Access 3 Competitor KIL - AS			114	1-1/4" (32 mm)							
29	Access 3 Competitor KIL - AHS			138	1-3/8" (35 mm)							
30	Rim			112	1-1/2" (38 mm)							
33	Thumbturn Rim			134	1-3/4" (44mm)							
35	Access 3 Rim - AP			200	2" (51 mm)							
36	Access 3 Rim - AS			214	2-1/4" (57 mm)							
37	Access 3 Rim - AHS			212	2-1/2" (64 mm)							
42	Special Application			(Rim Tailpiece)								
44	DL2200, DL3200			058	5/8" (16 mm)							
45	Access 3 DL2200/ DL3200 - AP			114	1-1/4" (32 mm) IC							
46	Access 3 DL2200/ DL3200 - AS			138	1-3/8" (35 mm)							
47	Access 3 DL2200/ DL3200 - AHS			178	1-7/8" (48 mm) IC							
80	IC-Core Only (LFIC)			178V	1-7/8" (48 mm) vertical IC							
85	Access 3 IC Core - AP			200	2" (51 mm)							
86	Access 3 IC Core - AS			200V	2" (51 mm) vertical							
				318	3-1/8" (78 mm) IC							
				312	3-1/2" (89 mm)							
				312V	3-1/2" (89 mm) vertical							
87	Access 3 IC Core - AHS											
2300	RFC Padlock											

\*For cylinder options, see pages 43-44

Finish	
Description	Specify
Bright Brass	605
Satin Brass	606
Bright Bronze	611
Satin Bronze	612
Dark Oxidized Satin Bronze, Oil Rubbed	613
Dark Oxidized Satin Bronze, Equivalent	613E
Bright Nickel Plated	618
Satin Nickel Plated	619
Flat Black Coated	622
Bright Chromium Plated	625
Satin Chromium Plated	626
Bright Stainless Steel	629
Satin Stainless Steel	630
Black Oxidized Bronze, Oil Rubbed	722

# Conventional Key Systems

## Mortise

### Mortise Cylinders

For use with all mortise locks and DL3000 Deadlocks. IC: page 15.  
Security: page 17. Master Ring: page 20.  
Pyramid: page 24.



Type	Length	Cam	Pins	Keyway	Finish
1000	100 1" (5 pin only)	(see page 40)	5 (1" length only)	(see pages 31-39)	605
	118 1-1/8" (standard)	A01 Cloverleaf	6 (standard)		606
	114 1-1/4"	A02 Straight	7 (available for 1-1/4"-3")		611
	138 1-3/8"	A03 Adams Rite® MS and			612
	112 1-1/2"	DL3000 Deadlock			613
	134 1-3/4"	A04 DL4000 Deadlock			622
	200 2"	A05 Adams Rite 4070			625
	214 2-1/4"	A06 Schlage® Cloverleaf			626
	212 1-1/2"	A07 DL4100			629
	234 2-3/4"	A62 MR Straight / 900 Series Mullion			630
	300 3"	A92 Exit Grip Trim 01 & 02			722
	314 3-1/4"	A93 Obsolete deadlocks: Corbin® 610 Series and Russwin® 1403 Series			
	312 3-1/2"				
	334 3-3/4"				

### Flexible Head Mortise Cylinders

Use Flexible Head mortise cylinders only with sectional trim mortise locks. The head is spring-loaded to adjust for minor variations in door thickness. See page 20 for Master Ring

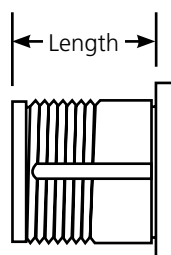


Type	Length	Cam	Pins	Keyway	Finish
1100	100 1" (6-pin std.)	(see page 40)	6 (standard)	(see pages 31-39)	605
	118 1-1/8"	A01 Cloverleaf	7 (available for 1-1/4" - 1-1/2")		606
	114 1-1/4"	A02 Straight			611
					612
					613
					618
					619
					625
					626
					722

### Concealed Shell Mortise Cylinders

Concealed shell cylinders are for mortise locks using "Plug Only to Show" escutcheon trim.

Type	Length	Cam	Pins	Keyway	Finish
1200	100 1" (6-pin std.)	(see page 40)	5 (1" length only)	(see pages 31-39)	606
	118 1-1/8"	A01 Cloverleaf	6 (standard)		626
	114 1-1/4"	A02 Straight	7 (available only for 1-1/4" - 1-1/2")		
	138 1-3/8"				
	112 1-1/2"				



Length is measured from behind the cylinder head to the end of the cam.  
For cam illustrations and applications, see page 40.

# Corbin® X Class

# Keyways

## Key Systems

### 57 Series

8 keyway multiplex system. All-Section Key  
Available 5-, 6-, and 7-pin.  
X Class bitting.

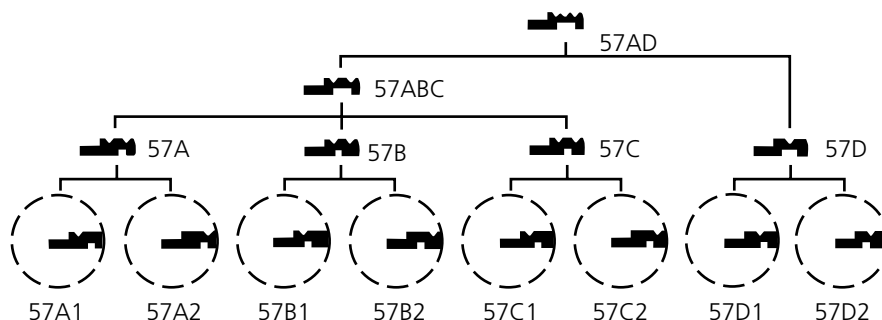
Reverses

57A1 27B2  
57A2 27B1  
57B1 27A2  
57B2 27A1

Multi-Section Key

Multi-Section Key

Cyl. Keyway and  
Single Section Key



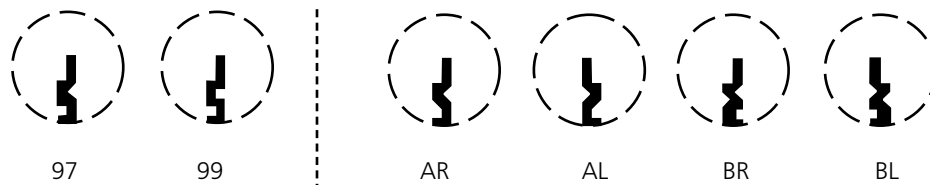
Security



Not Available

### Simplex Keyways

6 independent keyways.  
Available 5-, 6- and 7-pin.  
X Class bitting.



Security



Not Available

# Quick Codes/How to Order

## Key Systems

### Stamping Options\*

Description	Quick Code
Keys stamped with bitting number	(standard)
No keyset or bitting stamping on keys	VKC0
Keys only stamped with keyset (standard for HS, CHS, PS, PHS, PCS, PCHS)	VKC1
Keys stamped with keyset, cylinders stamped with keyset on face of plug - not available for HS, CHS, PS, PHS, PCS, PCHS	VKC2
Keys stamped with bitting, cylinders stamped with keyset on face of plug - not available for HS, CHS, PS, PHS, PCS, PCHS	VKC3
Keys stamped with keyset, cylinders stamped with keyset in concealed location	CKC2
Keys stamped with bitting, cylinders stamped with keyset in concealed location- not available for HS, CHS, PS, PHS, PCS, PCHS	CKC3
Less Trade Mark (No Corbin Russwin logo on cylinders)	LTM

\*see page 6 for detailed descriptions

### KeyBow Options

Description	Quick Code
Corbin Russwin logo	(standard)
Plain both sides	KB11
Do Not Duplicate	KB12
US Property Do Not Duplicate	KB13
Protected Do Not Duplicate (only for protected keyways)	KB19
Restricted Do Not Duplicate (only for restricted keyways)	KB19
Pyramid (only for Pyramid keys)	KB28
Large bow, plain both sides	KB51
Large bow, Do Not Duplicate	KB52
Large bow, US Property Do Not Duplicate	KB53
Large bow, protected Do Not Duplicate (only for protected keyways)	KB19
Large bow, Restricted Do Not Duplicate (only for restricted keyways)	KB59
Security bow Corbin Russwin logo (only for security keys)	KB90
Security bow plain both sides (only for security keys)	KB91
Security bow, Do Not Duplicate (only for security keys)	KB92
Security bow, US Property Do Not Duplicate (only for security keys)	KB93
Security bow, protected Do Not Duplicate (only for security keys, protected keyways)	KB99
Security bow, Restricted Do Not Duplicate (only for security, restricted keyways)	KB99

## How to Order Cylinders

### Mortise Separately

Keyset	Cylinder	Length	Cam	Pins	Keyway	Finish
AA1	1000	118	A01	7	L4	626

### Rim Separately

Keyset	Cylinder	Length	Pins	Keyway	Finish
AA1	3000	058	7	L4	626

### Key-in-Lever/Knob Separately

Keyset	Cylinder	Lockset Series	Pins	Keyway	Finish
AA1	2000	033	7	L4	626

### IC Cores Separately

Keyset	Cylinder	Pins	Keyway	Finish
AA1	8000	7	L4	626