Cylinder, Core & Keying









CYLINDER, CORE & KEYING - CONVENTIONAL CYLINDERS

Keying Options

Keyed function locks are supplied standard with Schlage 'C' keyway cylinder, cylinder drilled 6-pin, keyed 5-pin and will be keyed different with two operating keys unless otherwise specified.

- . Keyed Alike, 0 Bitted and 1 Bitted cylinders provided 6 pin only
- . Master Keyed [must specify quantity of Master keys where applicable, 3961 (5-pin) or 3962 (6-pin)]
- . Construction Master Keyed (Schlage C, E & F)
- . Keyed to Specific or Existing Number
- . Submit master keying form; pages 88-91 or at www.hagerco.com
- Extra Cut Keys (3961 Cut 5-pin, 3962 Cut 6-pin)
- . Key Markings: 1AA, 2AA etc. (per key)
- . Key Markings other than Key Set (per key)
- Cylinder markings
- . Bitting Lists are available, ordered separately from Master Keyed order, specify 3998
- All optional keyways below may not be immediately available. Contact customer service for more information on a particular keyway.

Optional Keyways (Conventional Cylinders)



Keys



3955 Key Blank 5-pin, C keyway



3961 Cut Key5-pin, keyed to specific or existing number



3956 Key Blank 6-pin, C keyway



3962 Cut Key6-pin, keyed to specific or existing number



CYLINDER, CORE & KEYING - CONVENTIONAL CYLINDERS

Cylinders



3960 Key-in Lever/Deadlock Cylinder Includes two operating keys Specify keyway, tailpiece, and how keyed Note: Cylinder instructions and ordering guide available on www.hagerco.com



2-639-7008 Tailpiece 9 Pack of 10 tailpieces for use with 3653L, 3670L and 3680L



2-639-7018 Tailpiece W Pack of 10 tailpieces for use with 3473L

Tailpieces



2-639-7000 Tailpiece 1 Pack of 10 tailpieces for use with 3453L, 3450L, 3480L, 2580L



2-639-7087 Tailpiece Z Pack of 10 tailpieces for use with 3570L and 3573L



Tailpiece 2 Pack of 10 tailpieces for use with 3470L

2-639-7001

2-639-7002

2-639-7006

Tailpiece 7



2-639-7094 Tailpiece X Pack of 10 tailpieces for use with 3495L



Tailpiece 3 Pack of 10 tailpieces for use with 3453K, 3480K, 3550L, 3553L, 3553K, 3579L, 3580L, 3580K, 3753L, 2550L, 2553L



2-639-7192 Tailpiece K Pack of 10 tailpieces for use with 4700 key-in-lever trim (KE, KN)



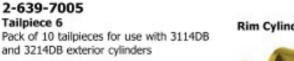
2-639-7003 Tailpiece 4 Pack of 10 tailpieces for use with 3470K,



2-639-7322 Tailpiece V Pack of 10 tailpieces for use with 2570L



3570K





3901 Rim Cylinder



 Conventional cylinder supplied drilled 6-pin, keyed 5-pin standard

- . Furnished with trim ring, mounting plate, and break off screws
- · Long tail piece standard
- · Supplied with two operating keys



2-639-7007 Tailpiece 8 Pack of 10 tailpieces for use with 3115DB, 3118DB, 3215DB, 3710DB, 3753DB

Pack of 10 tailpieces for use with 3114DB

and 3214DB interior cylinders



3903 Rim Dummy Cylinder





CYLINDER, CORE & KEYING - CONVENTIONAL CYLINDERS

Rim Cylinder Accessories



2-639-7058 Long Breakoff Tailpiece 2-3/8" (60 mm)



2-300-0118 Extra Long Breakoff Screws 2-3/8" (60 mm)



2-649-0137
Retaining Cup
Can be used with 45PN, 47PN, and 47RN

Mortise Cylinder Housing



3902 Mortise Cylinder

- Conventional cylinder supplied drilled 6-pin, keyed 5-pin standard
- 3975 standard cam attached and 3972
 Adams Rite cam shipped loose in the box
- . Thread size is 1.150" x 32 UNS
- · Cylinder face diameter is 1.360"
- · Supplied with two operating keys
- 1-1/8" (29 mm) standard length, 1-1/4" (31 mm), and 1-5/8" (41 mm) for mortise exit devices
- Other lengths may be available with extended lead time
- Must specify length, cam, keyway, and keying requirements



3904 Mortise Dummy

- 1-1/8" (29 mm) length
- 1-1/4" (31 mm) length



3905 Mortise ADA Turn Knob

specify if different

1-1/8" (29 mm) length
 1-1/4" (31 mm) length
Note: Ships with Schlage "L" Cam;

Mortise Cylinder Cams



3971 Yale Cam Radius .722" (18 mm)



3972 Adams Rite Cam Radius .560 (14 mm)



3973 Standard Cloverleaf Radius .741" (19 mm)



3974 Marks Cam Radius .755" (19 mm)



3975 Standard Cam Radius .723" (18 mm) For use with Hager exit devices and trim



3976 Schlage L Cam Radius .637" (16 mm) For use with Hager mortise locks (all functions)



3977 Sargent/Yale Cam Radius .733" (18.6 mm)



3978 Corbin/Russwin/Best Cloverleaf Radius .725" (18.5 mm)



CYLINDER, CORE & KEYING - SMALL FORMAT INTERCHANGEABLE CORE

Keying Options

Cores are furnished keyed different unless otherwise specified. Other keying options include:

- · Keyed Alike
- Construction Cores
- Master keyed (Must specify quantity of master keys, control keys, or additional change keys, 3984.)
- · Keyed to specific or existing number
- Key Markings: 1AA, 2AA etc. (per key) VKC
- . Key markings other than key set
- Core markings (Visual or concealed)
- · Do not duplicate
- · Bitting Lists are available, ordered separately from Master Keyed order, specify 3998
- * Construction master keyed not available.

SFIC Keyways (Best) - A, B, C, D, E, F, G, H, J, K, L, M, Q SFIC Cores



3981-C Combinated Core 6-Pin Includes two change keys Finishes include US4 or US26D

3981-U Uncombinated Core 6-Pin Includes two key blanks Finishes include US4 or US26D

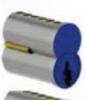


3982-C Combinated Core 7-Pin Includes two change keys Finishes include US4 or US26D

3982-U Uncombinated Core 7-Pin Includes two key blanks Finishes include US4 or US26D

SFIC Construction Cores

Construction Small Format Interchangeable Cores are available in blue or red and are keyed alike. Will receive full credit, less shipping, of original cost upon return of construction cores with keys.



3981-Blue or 3981-Red Construction Core Combinated, 6-pin Includes two operating keys



3982-Blue or 3982-Red Construction Core Combinated, 7-pin Includes two operating keys



SFIC Keys



3983 SFIC Key Blank Best Keyways used with 6-pin and 7-pin cores



3984 SFIC Cut Key Best Keyways used with 6-pin and 7-pin cores

SFIC Construction Core Keys



2-639-7168 3984 Control Key (BA IC 6 Blue)

2-639-7169 3984 Control Key (BA IC 7 Blue)

2-639-7170 3984 Control Key (BA IC 7 Red)

2-639-7113 3984 Control Key (BA IC 6 Red)

Note: Two (2) control keys will be shipped with an order unless otherwise specified.



CYLINDER, CORE & KEYING - SMALL FORMAT INTERCHANGEABLE CORE

SFIC Tailpieces



2-639-7060

Pack of 10 tailpieces for use with 2500/3500 Series SFIC lever (6-pin/7-pin combo)



2-639-7061

Pack of 10 tailpieces for use with 3400/3500 Series SFIC knob (6-pin/7-pin combo)



2-639-7090

Pack of 10 tailpieces for use with 3753 Interconnected Lock SFIC lever (6-pin/7-pin combo)



2-639-7091

Pack of 10 tailpieces for use with 3114/3214 SFIC deadbolt (6-pin/7-pin combo)



2-639-7095

Pack of 10 tailpieces for use with 3115/3118/3215 and 3710/3753 SFIC deadbolt (6-pin/7-pin combo)

SFIC Rim Cylinder Housing



3901 Rim Cylinder

- Furnished with trim ring, mounting plate, and break off screws
- . Long tail piece standard
- Small Format Interchangeable Core housing supplied less core
- . Specify 6- or 7-pin

SFIC Rim Cylinder Accessories



2-639-7058

Long Breakoff Tailpiece

2-3/8" (60 mm)



2-300-0118

Extra Long Breakoff Screws

2-3/8" (60 mm)



2-649-0137

Retaining Cup

Can be used with 45PN, 47PN, and 47RN

SFIC Mortise Cylinder Housing



3902

Mortise Cylinder

- 2-639-7082 standard cam;
 2-639-7083 Adams Rite cam shipped loose in the box
- Thread size is 1.150" x 32 UNS.
 Cylinder face diameter is 1.360"
- Small Format Interchangeable Core housing supplied less core
- Must specify length and cam, 6-pin 1-1/4", 7-pin 1-3/8", 7-pin 1-5/8" (for mortise exit device)

SFIC Mortise Cylinder Cams



2-639-7082 Standard Yale Cam



2-639-7083 Adams Rite Cam



2-639-7084 Standard Cloverleaf Cam



2-639-7085 Schlage "L" Cam

Schlage "L" Cam For use with Hager mortise locks (all functions)



2-639-7086 Sargent/Yale Cam





CYLINDER, CORE & KEYING - LARGE FORMAT INTERCHANGEABLE CORE

Keying Options

Cores are furnished zero bitted - unless otherwise specified. Other keying options include:

- · Keyed alike
- · Keyed different
- · Master keyed (must specify quantity of master keys, control keys or additional change keys)
- · Construction master keyed
- · Keyed to specific or existing number
- Key Markings: 1AA, 2AA etc. (per key) VKC
- . Key markings other than key set
- Core markings (visual or concealed)
- · Bitting Lists are available, ordered separately from master keyed order, specify 3998

LFIC Cores (Available in Schlage C Only)



3919 Zero Bitted Core 6-Pin Includes two key blanks Finishes include US4 or US26D

Combinated Core 6-Pin Includes two change keys Finishes include US4 or US26D

LFIC Tailpieces



2-639-7645 50, 53 and 80 functions only



2-639-7646 70 function only



2-639-7647 73 and 95 functions only

LFIC Keys



3956 Key Blank Schlage C Keyway, 6-pin only



3962 Cut Key Schlage C Keyway, 6-pin only



3963 3919 Control Cut Key



2-639-7649 3919 Control Key Blank

LFIC Rim Cylinder Housing



3901 Rim Cylinder

- Furnished with trim ring, mounting plate, and break off screws
- · Tail piece supplied standard
- Large Format Interchangeable Core housing supplied less core.
- 6-pin only

LFIC Rim Cylinder Accessories



2-639-7578 Breakoff Tailpiece Assy 2-3/8" (60 mm)



2-300-0175 Breakoff Screws 2-1/8" (54 mm)





CYLINDER, CORE & KEYING - LARGE FORMAT INTERCHANGEABLE CORE

LFIC Mortise Cylinder Housing



3902

Mortise Cylinder

- 2-639-7082 standard cam; 2-639-7083 Adams Rite Cam shipped loose in the box.
- . Thread size is 1.150" x 32 UNS. Cylinder face diameter is 1.360".
- · Large Format Interchangeable Core housing supplied less core
- · Must specify cam, 1-1/2" length

LFIC Mortise Cylinder Cams



2-639-7570 Standard Yale Cam



2-639-7571 Adams Rite Cam



2-639-7572 Schlage "L" Cam For use with Hager mortise locks (all functions)



2-639-7573 Corbin Cam



2-639-7574 Sargent/Yale Cam





CYLINDER, CORE & KEYING - CONVENTIONAL CYLINDERS - HAGER KEYWAY - (7-PIN ONLY)

Keying Options

Keyed function locks are supplied keyed different unless otherwise specified.

- . Keyed alike, 0 bitted, 1 bitted
- Master keyed (must specify quantity of Master keys where applicable)
- · Construction master keyed
- · Keyed to specific or existing number
- Submit master keying form (page 86)
- . Extra cut keys (3908 Cut 7-pin)
- . Key markings: 1AA, 2AA etc. (per key)
- . Key markings other than key set (per key)
- · Cylinder markings (visual or concealed)
- . Do not duplicate standard
- Bitting lists are available, ordered separately from Master keyed order, specify 3998

Notes: . Keys are cut bow to tip

. Must purchase capping block/press and key punch due to 140 pin spacing

MULTI - SECTION KEYS H12 H23 H23 H23 H23 H3

ALL - SECTION KEY

Hager Keyway (Conventional Cylinders)

Hager H1





Cylinders



3906

Key-in Lever/ Deadlock Cylinder

- · 140 Pin spacing
- · Includes two operating keys
- Specify Hager keyway, tailpiece, and keying requirements

Note: Cylinder instructions and ordering guide available online.

Rim Cylinders



3901 Rim Cylinder

- · 140 Pin spacing
- Conventional cylinder supplied 7-pin only
- Furnished with trim ring, mounting plate, and break off screws
- · Long tail piece standard
- · Supplied with two operating keys

Mortise Cylinders



3902 Mortise Cylinder

- · 140 Pin spacing
- · Conventional cylinder supplied 7-pin only
- 3975 standard cam attached and 3972 Adams Rite cam shipped loose in the box
- Thread size is 1.150" x 32 UNS
- Cylinder face diameter is 1.360"
- · Supplied with two operating keys
- 1-1/8" (29 mm) standard length, 1-1/4" (31 mm) available, 1-5/8" (41 mm) for mortise exit devices
- Must specify length, cam, keyway, and keying requirements

Keys



3907 Key Blank

Hager keyways (H1, H2, H3, H12, H23, H123)



3908

Cut Key

- Hager keyways (H1, H2, H3, H12, H23, H123)
- Specify keying required (masterkey, construction masterkey, control key)





CYLINDER, CORE & KEYING - SFIC - HAGER KEYWAY - (7-PIN ONLY)

Keying Options

Cores are furnished keyed different unless otherwise specified. Other keying options include:

- · Keyed alike
- . Master keyed (must specify quantity of master keys, control keys or additional change keys)
- · Keyed to specific or existing number
- . Key markings: 1AA, 2AA etc. (per key) VKC
- . Key markings other than key set
- · Core markings (visual or concealed)
- . Do not duplicate standard
- · Bitting lists are available, ordered separately from master keyed order, specify 3998
- * Construction master keyed not available.

Notes: • Keys are cut bow to tip

. Must purchase capping block/press and key punch due to 140 pin spacing

Keyways (Hager) - H1, H2 and H3 SFIC Cores



3969

Combinated Core 7-Pin

- · Includes two change keys
- · Finishes include US4 or US26D
- · 140 Pin spacing

SFIC Rim Cylinder Housing



3901

Rim Cylinder

- Furnished with trim ring, mounting plate, and break off screws
- · Long tail piece standard
- Small Format Interchangeable Core housing supplied less core
- · Specify 7-pin



3909

Uncombinated Core 7-Pin

- · Includes two key blanks
- · Finishes include US4 or US26D
- 140 Pin spacing

SFIC Mortise Cylinder Housing



3902

Mortise Cylinder

- 2-639-7082 standard cam; 2-639-7083 shipped loose in the box
- Thread size is 1.150" x 32 UNS.
 Cylinder face diameter is 1.360".
- Small Format Interchangeable Core housing supplied less core
- Must specify length and cam, 7-pin 1-3/8"





3907

SFIC Key Blank

Hager keyways (H1, H2, H3, H12, H23, H123)



3908

SFIC Cut Key

- Hager keyways (H1, H2, H3, H12, H23, H123)
- Specify keying required (masterkey, construction masterkey, control key)



CYLINDER, CORE & KEYING - HAGER KEYWAY ACCESSORIES

2-639-7511

Pin Kit

- Includes top pins, SFIC bottom pins, full size bottom pins and springs
- · Does not include SFIC caps

2-639-7517

Construction Balls

- · Used for lost ball construction key
- · Order in multiples of 1,000

2-639-7519 Retaining Pin Spring Sold in multiples of 100

2-639-7520 Individual SFIC Caps Sold in mulitples of 500

2-639-7526 Retaining Pin Secures screw cap on KIK cylinder

2-639-7527 Plug Follower (KIK)

2-639-7529 Decombinating Punch

2-639-7530 Capping Punch

2-639-7531 Decombinating Block (Punch Included)

2-639-7532 Manual Capping Block (Punch Included) 140 spacing

2-639-7534 Cap Saver Press

- Recommended for field pinning uncombinated SFIC cores
- 140 spacing

2-639-7535 Key Punch 140 spacing

2-639-7536 HPC 1200 Series Code Card 140 spacing





CYLINDER, CORE & KEYING - PINS

Part Number	Description	Size
2-639-8188	Top Pin	#2
2-639-8189	Top Pin	#3
2-639-8190	Top Pin	#4
2-639-8191	Top Pin	#5
2-639-8192	Top Pin	#6
2-639-8193	Top Pin	#7
2-639-8194	Top Pin	#8
2-639-8195	Top Pin	#9
2-639-8196	Top Pin	#10
2-639-8197	Top Pin	#11
2-639-8198	Top Pin	#12
2-639-8199	Top Pin	#13
2-639-8200	Top Pin	#14
2-639-8201	Top Pin	#15
2-639-8202	Top Pin	#16
2-639-8203	Top Pin	#17
2-639-8204	Top Pin	#18
2-639-8205	Top Pin	#19
2-639-8210	Full Bottom	#0
2-639-8211	Full Bottom	#1
2-639-8212	Full Bottom	#2
2-639-8213	Full Bottom	#3
2-639-8214	Full Bottom	#4
2-639-8215	Full Bottom	#5
2-639-8216	Full Bottom	#6
2-639-8217	Full Bottom	#7
	i an account	7.7
2-639-8218	Full Bottom	#8
	Full Bottom Full Bottom	#8
2-639-8219	Full Bottom Full Bottom	
2-639-8219	Full Bottom SFIC Bottom	#9 #0
2-639-8219 2-639-8220	Full Bottom	#9
2-639-8219 2-639-8220 2-639-8221	Full Bottom SFIC Bottom	#9 #0 #1 #2
2-639-8219 2-639-8220 2-639-8221 2-639-8222	Full Bottom SFIC Bottom SFIC Bottom	#9 #0 #1 #2 #3
2-639-8219 2-639-8220 2-639-8221 2-639-8222 2-639-8223	Full Bottom SFIC Bottom SFIC Bottom SFIC Bottom	#9 #0 #1 #2
2-639-8219 2-639-8220 2-639-8221 2-639-8222 2-639-8223 2-639-8224	Full Bottom SFIC Bottom SFIC Bottom SFIC Bottom SFIC Bottom	#9 #0 #1 #2 #3
2-639-8219 2-639-8220 2-639-8221 2-639-8222 2-639-8223 2-639-8224 2-639-8225	Full Bottom SFIC Bottom SFIC Bottom SFIC Bottom SFIC Bottom SFIC Bottom	#9 #0 #1 #2 #3 #4
2-639-8219 2-639-8220 2-639-8221 2-639-8222 2-639-8223 2-639-8224 2-639-8225 2-639-8226 2-639-8227	Full Bottom SFIC Bottom SFIC Bottom SFIC Bottom SFIC Bottom SFIC Bottom SFIC Bottom	#9 #0 #1 #2 #3 #4
2-639-8219 2-639-8220 2-639-8221 2-639-8222 2-639-8223 2-639-8224 2-639-8225 2-639-8226	Full Bottom SFIC Bottom	#9 #0 #1 #2 #3 #4 #5



CYLINDER, CORE & KEYING - HOW TO ORDER KEY SYSTEMS

2 LEVEL SYSTEMS Simple Master Key System

The master key symbol consists to TWO letters, AA. The change key numbers are added to the master key letters. The numbers come FIRST for a simple master key system, example: 1AA, 2AA, 3AA, etc.

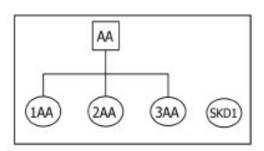
3 LEVEL SYSTEMS Grand Master Key System

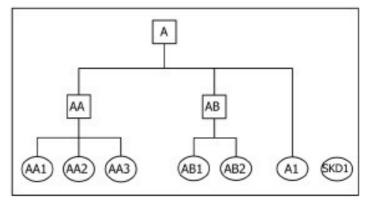
The grand master keyset symbol is assigned ONE letter, starting with A.

The master keyset symbols under this grand are assigned TWO letters, the

first of which will be the same as the grand; AA, AB, AC, etc. are all masters under the grand A. (Caution: Do not use the letters, I, O, Q or X because of the possible confusion with the numbers 1 & O. X is reserved for identifying cross keying.) Change key numbers come AFTER the letters, example: AA1, AA2, AA3, etc.

For master keyset symbols beyond AZ, insert a number between the letters to designate which pass through the alphabet they represent. A2A through A2Z represent the second pass through the alphabet of masters under the Grand A. A3A through A3Z would be the third pass through the alphabet. Change keys under these masters have the numbers suffixed in the usual way A2A1, A2A2, A2A3, etc.



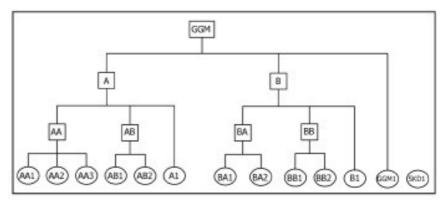


If a cylinder is to be operated by its change key and the GMK only (No master), the change number is added to the GMK symbol. This is illustrated by the keyset symbol A1 in the schematic shown.

4 LEVEL SYSTEMS Great Grand Master Key System

The great grand master is assigned the keyset symbol **GGM**. The rest of the symbols are the same as those in a 3 level system.

The grand master keys under the GGM are assigned the keyset symbol of single letters of the alphabet A, B, C, D, etc., starting with A. The master keyset symbols under this grand are assigned TWO letters, the first of which will be



the same as the grand; AA, AB, ..., BA, BB, ..., CA, CB, ..., etc. (Caution: Do not use the letters, I, O, Q or X because of the possible confusion with the numbers 1 & O. X is reserved for identifying cross keying.) Change key numbers come AFTER the letters, example: AA1, AA2, AA3, etc.

For masters beyond AZ, insert a number between the letters to designate which pass through the alphabet they represent. A2A through A2Z represent the second pass through the alphabet of masters under the Grand A. A3A through A3Z would be the third pass through the alphabet. Change keys under these masters have the numbers suffixed in the usual way A2A1, A2A2, A2A3, etc.

If a cylinder is to be operated by its change key and the GGM only (No grandmaster, no master), the change number is added to the GGM keyset symbol. This is illustrated by the keyset symbol **GGM1** in the schematic shown.





CYLINDER, CORE & KEYING - HOW TO ORDER KEY SYSTEMS

SINGLE KEYED DIFFERENT (SKD) (Example: Narcotics Room, Pharmacies)

When requirements are such that no other key operates the cylinder (master, other change keys, etc.) they are referred to as "single keyed different" and given the keyset symbol **SKD**. When more than one SKD is required in a facility, they are numbered **SKD1**, **SKD3**, **etc.**

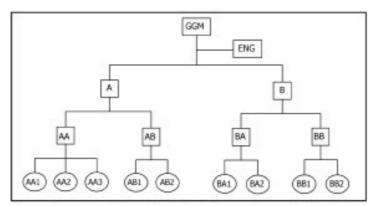
NO MASTER KEY (NMK)

When keying requirements are such that all higher levels of master keys do not operate the cylinder, the suffix (NMK) is added to the keyset symbol. For example, AA1 (NMK) is operated by the change key AA1 only. Neither the A grand, nor the AA master operate the cylinder. A keyset symbol, AA (NMK) indicates the cylinder to be operated by the AA master only, the A grand does not operate the cylinder.

SELECTIVE MASTER KEYS

It is often useful in large keying systems to issue a high level master key to maintenance personnel which allows access across all master and grand master key boundaries of a keying system.

To designate that a lock be operated by a selective master key, suffix the symbol in parentheses to the standard symbol. Example: **AA1 (ENG)**. This must be added every time the selective key is to operate and left off whenever the selective key is NOT to operate. For instance, you may lay out a system in which key **AA1** is to operate two different offices. Inside one of them is an



electrical cabinet which must be accessible to maintenance personnel carrying the ENG key. That lock must be specified as AA1 (ENG), while the lock for the other office must be specified as AA1.

Selective master key is a convenience feature which decreases the security of the cylinders it operates and limits the expansion and flexibility of the overall keying system. Each selective master key typically eliminates 20-25% of the capacity of the system where it is used, so it should only be specified when absolutely required. It is recommended that no more than one system-wide selective master key be used within the same system.

CROSS KEYING

Like selective master keying, cross keying is a convenience feature and will limit the expansion and flexibility of the overall key system. Whenever two or more different change keys such as **AA1** and **AA2** are both required to operate the same cylinder, the cylinder's security is reduced. This is called cross keying. When the cross keying occurs under all the same higher levels (MK, GMK), such as **AA1** and **AA2**, it is known as controlled cross keying. When you combine keys under different higher levels (MK, GMK, GGMK), such as **AA1** and **AB1**, it is known as uncontrolled cross keying, which you NEVER want to do.

Convenience may reduce cylinder security and hinder the overall key system expansion. Cross keying usually imposes limits on the flexibility and expansion of the overall keying system. This is especially true of uncontrolled cross keying. For these reasons, it is strongly recommended to allow personnel to carry more than one key. Cross keying should be discouraged whenever possible. However, when cross keying is required, it is specified as follows, and should be summarized at the beginning of each order. It cannot normally be added later. Each cross keyed set should also be limited to keys which are all under the same higher level master keys. Prefix the keyset symbol with the letter X (example: XAA3) All keys which are to operate the cylinder are to be listed following the keyset symbol with the phase "to be operated by" ("TBOB", "OB", "operated by" are also common phrases/ abbreviations used. Example: XAA3, operated by AA1, AA2, AA, and A. Note that X is a cylinder designation only. The change keyset would be AA3.

NOTE: HAGER WILL NOT DO UNCONTROLLED CROSS KEYING DUE TO THE REDUCED SECURITY IT CAUSES.



CYLINDER, CORE & KEYING - HOW TO ORDER KEY SYSTEMS

CONSTRUCTION MASTER KEYING

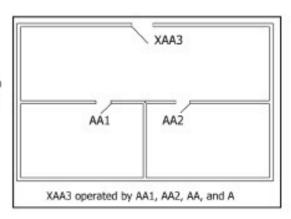
Hager uses the lost ball method for construction keying for conventional cylinders. If you have ordered Small Format Interchangeable Core (SFIC), you will be able to order temporary cores (Blue & Red are stock). Permanent cores will be shipped with permanent keys.

Recommendation:

Use as many keyed alike groups to conserve bitting combinations. Study blueprints and/or master plans for campuses to identify areas where more than one door leads into the same space, and where several different areas are used by the same personnel. These areas should be keyed alike (use the same keyset symbol). This conserves key bitting combinations for future use as well as reduces the need to issue master keys. Remember, key system are much like a rubber band, it only stretches so far. You can stretch is horizontally to create more master keys, or vertically to create more changes under each master, but there is a finite number of combinations available.

Case #1 (Cross Keying)

Cylinder requires its own change key. The illustration depicts part of a small medical building where two doctors share a common receptionist. The receptionist gets the AA3 change key. Each doctor carries a key which operates only one office, but also operates the entrance from the corridor, by cross keying that cylinder to include the following keys to operates it. XAA3, TBOB (To Be Operated By) AA1, AA2, AA and A.



Case #2

The hall door cylinder does not require its own change key. This illustration depicts a section of a floor in a dormitory. Each student's bedroom change key operates the hall door cylinder. There is no need to construct a change key which operates only the hall door.

In this case, place an **X** at both the beginning and the end of the keyset symbol and a number between them. Example: **X1X**, **X2X**, **etc**. Again, always include the "TBOB" (to be operated by) phrase with a complete listing of the keyset symbols to operate the cylinder.

