

GUIDE TO

GOAL[®]

SINCE 1914

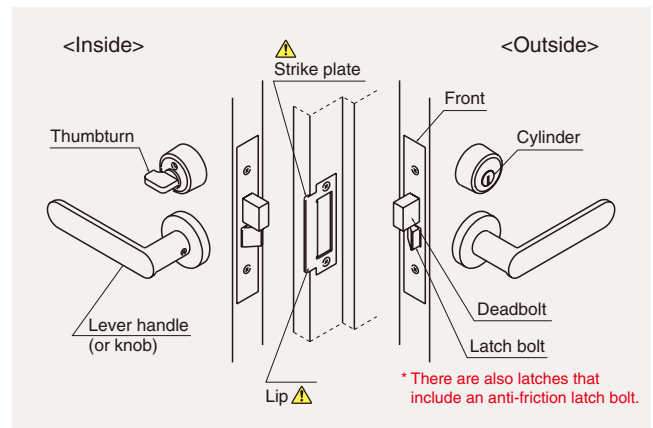
LOCKS



Precautions for Use and Handling of Locks

Please observe the following points so that the locks can be used correctly for a long period of time.

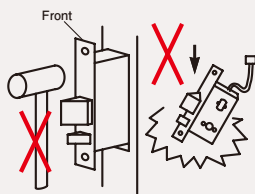
- 1 Be sure to check that the deadbolt is fully extended when locked.
- 2 Dust or dirt in the notches on the key ridge may adversely affect movement of the lock. If the key is dirty, be sure to use a toothbrush or other means to remove the dust or dirt.
- 3 Do not insert any foreign object into the cylinder keyhole.
- 4 If the screws which fasten the lock, strike plate, handle, knob, or other part become loose, retighten them.
- 5 Do not attempt to disassemble or modify the lock.
- 6 Locks without waterproof specifications must be installed in a location not exposed to direct contact with rainwater or other water droplets.
- 7 If the lock no longer moves smoothly due to warpage or sagging of the door as it ages, the door itself must be repaired by a door specialist. If this occurs, immediately notify the building superintendent, contractor, or the door manufacturer.
- 8 If a protective sheet is applied to the lock front or strike plate, be sure to remove it.
- 9 The use of a copied key that is not a manufacturer genuine key may adversely affect movement of the cylinder. Use a genuine GOAL key whenever possible.
- 10 Do not open or close the door with the deadbolt extended.
- 11 Do not label the key in any way that indicates where the key is used.
- 12 Be careful not to scratch the lock and in particular the surface of the handle.



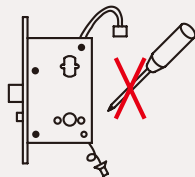
⚠ Precautions: A range of strike plate lip sizes are available. Choose the optimal size so that the strike plate does not protrude excessively from the frame.

With an electric lock, pay particular attention to the following points.

- 1 Do not drop an electric lock, strike it with a hammer, or otherwise subject it to impact. In particular, never strike the front part.



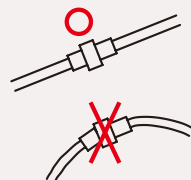
- 2 Do not attempt to disassemble an electric lock.



- 3 Do not suspend the lock by holding the lead wire, and do not bend or damage the lead wire.



- 4 Connect the connector securely. An incomplete connection may result in operating failure.

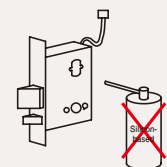


- 5 Avoid storing the lock in a location that is exposed to high humidity, high temperature, or contact with rainwater.

A product that does not have waterproof specifications must be used indoors in a location not exposed to direct sunlight or wind and rain. Also be careful that water does not contact the electric lock when cleaning it.



- 6 Do not use silicon-based lubricants. These may adversely affect the internal switches or other parts and result in malfunction.





Maintenance of Locks

Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

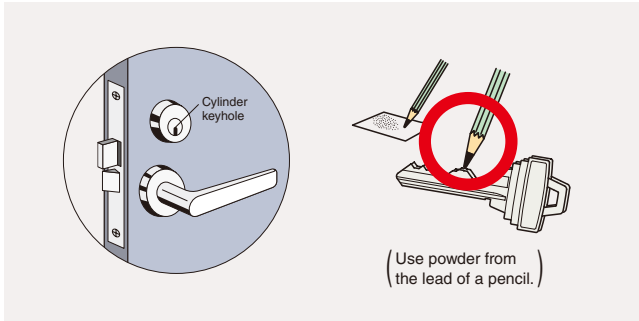
Electrical
conductors,
Control
boxes

Dimensions

Please perform the following maintenance so that the locks can always be used correctly and beautifully.

1 If there is resistance when inserting and removing the key or when turning the lock

If there is resistance when inserting and removing the key or when turning the lock, insert pencil (soft lead) powder (graphite powder) into the keyhole.



Caution

Never inject machine oil, anti-rust agent, lubricant, or similar substance into the cylinder keyhole. Doing so may result in operating failure.



Machine oil or similar substance



Anti-rust agent or lubricant

2 Periodically wipe the lock handle and other parts with a dry cloth.

Periodically (once every 1~2 months) wipe the handle and other parts on the surface of the lock with a soft, dry cloth. If dirt, dust, or other substance is left on the lock, it can cause discoloration and corrosion. Locations in coastal areas and close to heavily trafficked roads are particularly susceptible to contamination by salt and exhaust gases. Take particular care with maintenance in such locations.

When performing maintenance, do not clean using paint thinner or other organic solvent, acid, alkali, chlorine, or other chemical. Also do not allow water to directly contact the lock.

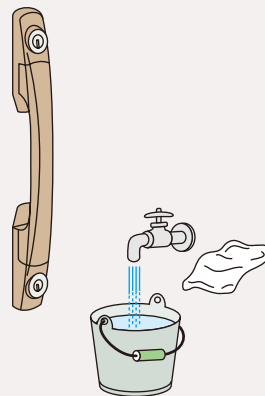
1. Dry wiping

- Wipe periodically with a soft, dry cloth.



2. Wet wiping

- If dry wiping does not remove the dirt, wipe with a damp cloth.

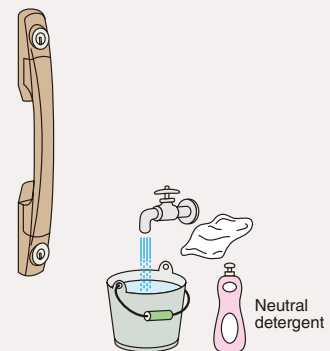


Dry wiping

* After wiping with a damp cloth, be sure to wipe again with a dry cloth.

3. Using a neutral detergent

- If wiping with a damp cloth does not remove the dirt, use a neutral detergent.



Wet wiping

Dry wiping

* After using a neutral detergent, be sure to wipe with a damp cloth and finally with a dry cloth.

(Caution) Do not scrub the lock or handle with a hard brush. Also never use paint thinner or other organic solvent to remove dirt.

Contents and List of Products <Locks>

▼ Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

▼ Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

▼ Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

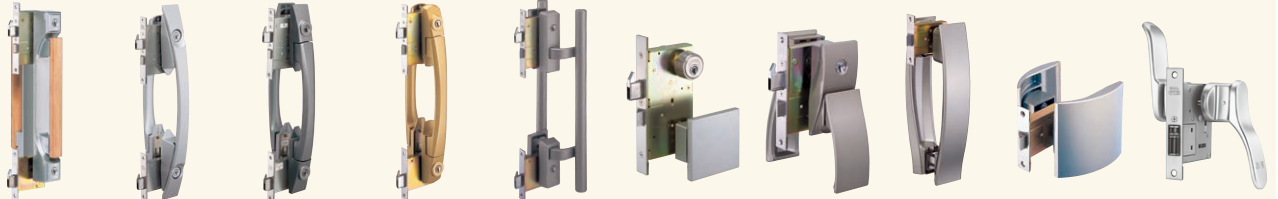
Electric
locks

Electrical
conductors,
Control
boxes

Dimensions

1. Push-pull locks, passage latches P.17~24

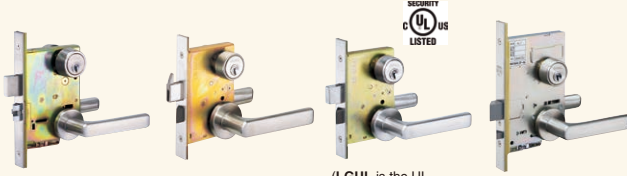
P.17~24



PXK-GON, GOP (P.21) **PXK-GOQ** (P.21) **PX, PXK-GSA** (P.21) **PXK-GOE** (P.21) **PZK, PZ** (P.22) **PL, PLK** (P.22) **PVKU** (P.23) **PXY** (P.23) **PY-GOM, GOU** (P.24) **PYS** (P.24)

2. Lever handle locks, partition locks, passage latches P.25~35

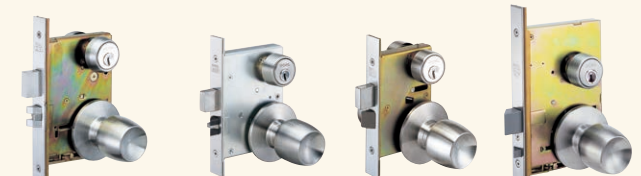
P.25~35



AHL, AHLP (Anti-panic type)
AHL-9 (Hotel lock)
(P.30, 31) **LGK** (P.32)
(LGUL is the UL certified product.)
LGF, LG, LGT, LX (P.32~34) **LH, HL, HLT, HLP** (P.34, 35)

3. Mortise locks P.36~39

P.36~39



AH, AHP (Anti-panic type)
AH-9 (Hotel lock)
(P.37) **AXF** (P.38) **AS** (P.38) **HS, HST, HSP** (P.39)

4. Integral locks, cylindrical locks P.40~43

P.40~43



UC (P.40) **G** (P.41) **UH, US** (P.42, 43) **ULW** (P.43)

5. Rim dead locks P.44

P.44



MH (P.44) **MDU** (P.44)

6. Dead locks P.45

P.45



LDK (P.45) **HD** (P.45)

6. Dead locks, cremon locks, sliding hung door locks, cam locks P.46~50

P.46~50



1502, 1503 (P.46) **CGT** (P.47) **LXD, AHD** (P.47) **AD** (P.48) **HN** (P.48) **CMM** (P.49) **TSA** (P.50) **KM, KMC** (P.50)
(KMC includes a cover.)

7. Glass door locks P.51, 52

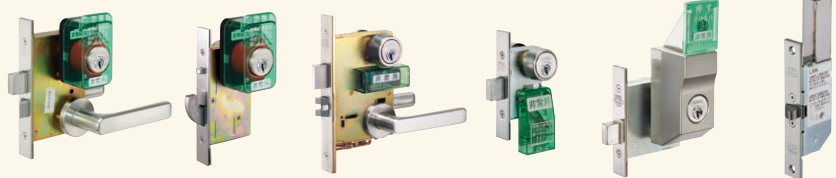
P.51, 52



2510, HDT (P.51) **CG** (P.52) **BGU** (P.52)

8. Emergency locks, automatic locking locks for auxiliary doors P.53~55

P.53~55



LGH (A, B)
ASH (A, B) (P.53) **SXH (A, B)** (P.53) **AHLH, others** (P.54) **HDH, AHDH** (P.54) **LDHPA** (P.54) **KT-2U** (P.55)

9. Cup handle locks P.56, 57

P.56, 57



AHC, ASC (P.56) **HSC, HSTC** (P.56) **UCC** (P.57) **GC** (P.57)

10. Sliding door locks P.58, 59



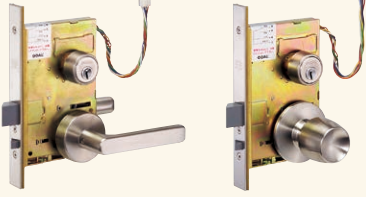





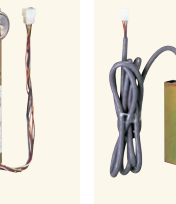
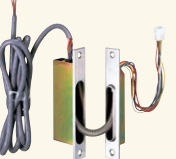


P.58, 59



SX, PSS (P.58) **SAK** (P.59) **SN** (P.59)

<Electric locks and security systems: Devices>











(Examples of use: Buildings, hotels, residences, etc. P.60~73)

1. Numeric keypad systems P.60	2. Key switches P.61	3. Interlock door systems, emergency door systems P.61	4. Hotel card locks P.62~66				
 <p>BTKLX (P.60)</p>	 <p>KS-3 (Example of installation on collective entrance unit)</p>	 <p>EU series (P.67)</p>	 <p>JCLM (NW, NS) (P.63) JCLM2 (P.63)</p>				
5. Electric locks (various types) P.67~71			6. Electrical conductors, control boxes, operation panels P.72, 73				
 <p>EU series (P.67)</p>	 <p>ELSF, ELM (P.69)</p>	 <p>ESSF, ESM (P.69)</p>	 <p>EMV series (P.70)</p>	 <p>SXEV series (P.71)</p>	 <p>RCL-21, 27 (P.72)</p>	 <p>RCB (P.73)</p>	 <p>RSP (P.73)</p>

* Be sure to inquire before ordering.

<Cylinders and thumbturns>





List of GOAL lock cylinders

Cylinder name [symbol]	Dimple key reversible pin cylinders			Pin cylinders	
	GP cylinder [GP]	V18 cylinder [V]	GV cylinder [GV]	6-pin cylinders [P] (Note 1)	7-pin cylinders [Z] (Note 1)
Cylinder front	 (See P.9 for details.)	 (See P.10 for details.)	 (See P.10 for details.)	 (See P.9 for details.)	 (See P.9 for details.)
Key shape					
Theoretical number of keys	12 billion	12 billion	1,000 trillion and 280 billion	1 million	18 million
Available key systems (See P.11~15.)	Master key system	○	○	○ (Note 1)	○ (Note 1)
	Grand master key system	○	○	○	○
	Great grand master key system	○	○	○	○
	Reverse master key system	○	○	○	○
	Keyed alike system	○	○	○	○
	Construction key system	○	○	○	○
	Double construction key system	×	○	○	×
Key change system	△ (Master key only) (Note 2)	○	○	×	×
Universal Key System	×	×	○	×	×

Note 1: Production of new master key plans for 6-pin and 7-pin cylinders discontinued as of March 2017.

Note 2: The number of possible changes for a GP cylinder master key change system is 1. (Key changes for change keys are not possible.)

List of GOAL lock security thumbturns

TM thumbturn 	TME security thumbturn 	TMB security thumbturn 	TMK security thumbturn 
--	--	--	---

* A variety of other types such as cover types (TMC security thumbturns) are also available. Please contact GOAL for more information.

* Be aware that use with some models may not be possible.

- This simple type features normal operation that is the same as a conventional thumbturn. A special mechanism prevents it from turning when an eccentric force is applied to prevent illegal unlocking.

- In normal mode, operates easily in the same way as a TM thumbturn while preventing illegal unlocking.
- Can be changed to free-turning mode by operating a switch. In free-turning mode, nearly all illegal methods of unlocking are impossible.

- This thumbturn is an always free-turning type, preventing nearly all illegal methods of unlocking.
- To operate the lock, press in the clutch switch before operating.

- This simple type features operation that is the same as an ordinary thumbturn when in normal mode.
- It can be changed to free-turning mode by using a special key. In free-turning mode, nearly all illegal methods of unlocking are impossible.

Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

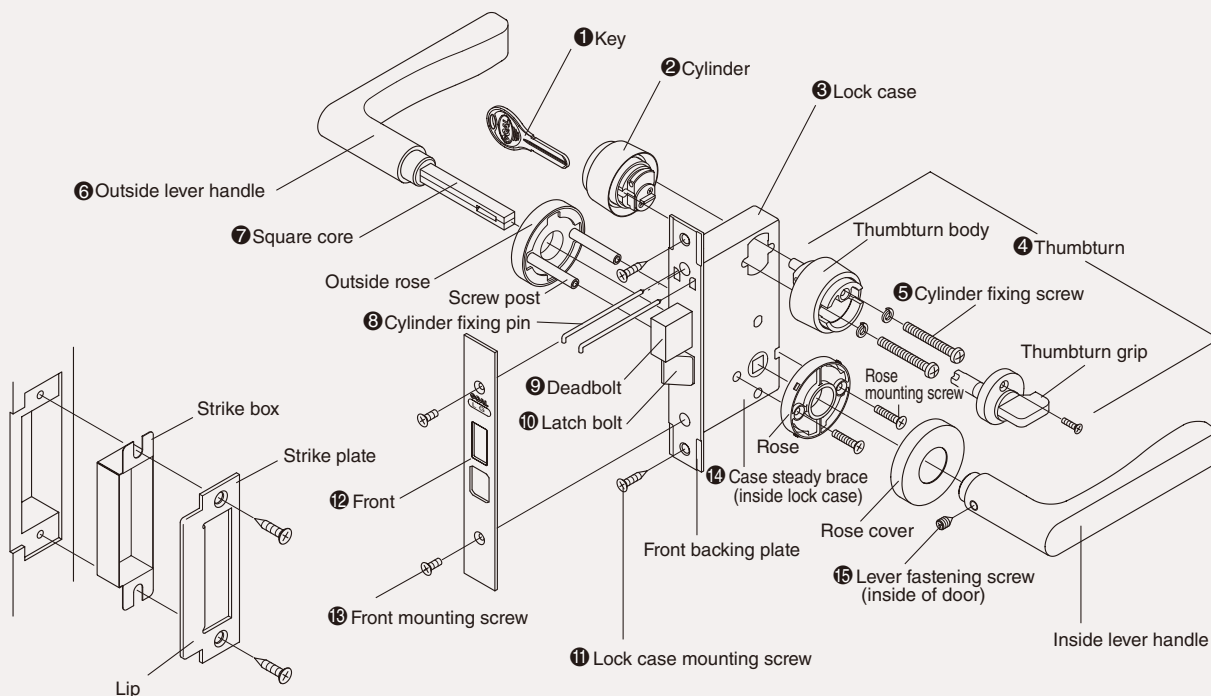
Electrical
conductors,
Control
boxes

Dimensions



Names and Functions of Lock Parts

(This figure shows V-LG-5NU (B/S 51) with lever handle lock LG Model 5, V18 cylinder, NU lever handle, and backset of 51 mm.)



Name	Function
1 Key	Operates the cylinder from the outside of the door to extend and retract the deadbolt 9 , locking and unlocking the lock.
2 Cylinder	Operated by the key in order to lock and unlock the lock. It is fastened firmly to the lock case by a double mechanism consisting of the cylinder fixing pins 8 and cylinder fixing screws 5 .
3 Lock case	Contains the lock mechanisms. It is mounted onto the door by the lock case mounting screws 11 .
4 Thumbturn	The grip operated from the inside of the door to extend or retract the deadbolt, locking and unlocking the lock.
5 Cylinder fixing screw	Fixes the cylinder 2 onto the lock case 3 .
6 Outside lever handle	Used to retract the latch bolt and open the door.
7 Square core	Fastened to the outside lever handle, this part operates the parts inside the lock case to retract the latch.
8 Cylinder and thumbturn fixing pin	Fixes the cylinder and thumbturn to the lock case.
9 Deadbolt	Operated by the key and thumbturn, and locks the door.
10 Latch bolt	Holding the door closed so that it does not open due to wind pressure or other factor.
11 Lock case mounting screw	Mounts the lock case onto the door.
12 Front	A covering plate which covers the front of the lock case 3 .
13 Front mounting screw	Screw for fix front 12 onto the lock case. When fasten below screw, case steady brace 14 will work. In case of LG, please make sure to fasten below screw lastly.
14 Case steady brace	Fastens the lock case to the door, ensuring stable operation of the lock.
15 Lever fastening screw	Fastens the square core 7 to the inside lever handle.

Information

- Precautions
- Table of contents / Product list
- Basic information

Cylinders Keying systems

Locks

Push-pull locks

Lever handle locks

Mortise locks

Integral locks Cylindrical locks

Rim dead locks

Dead locks Cremon locks Glass door locks

Emergency locks Cup handle locks

Sliding door locks

Electric locks Security systems

Ten-key pads

Key switches Interlock / emergency door systems

Hotel card locks

Electric locks

Electrical conductors, Control boxes

Dimensions

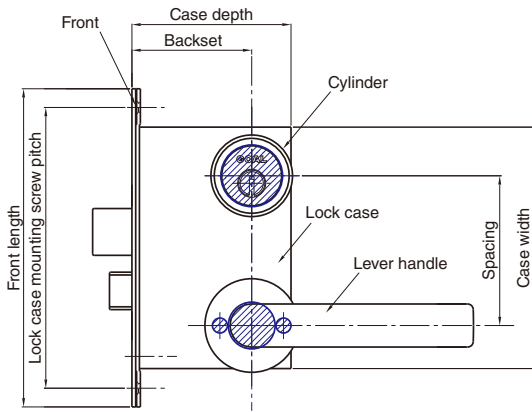


Lock Specifications

Backset

(Also indicated as B.S or B/S.)

This is the horizontal distance (mm) from the front surface of the lock case to the center of the cylinder, lever handle, or knob (center of the mounting hole).



Select an appropriate backset according to the door type and conditions.

Spacing

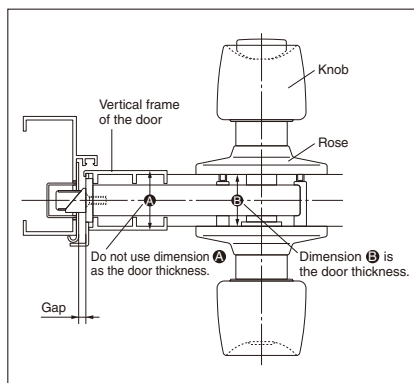
This is the vertical distance (mm) between the center of the cylinder and the center of the knob. When this distance is larger, the key or thumbturn can be operated more easily.

(**GOAL lock spacing** Lever handle locks LX: 75 mm, LG: 80 mm, mortise locks AH: 95 mm, AS: 80 mm)

Door thickness

This is the door thickness dimension where installation is possible. It is ordinarily indicated in units of millimeters (mm). Examples: 29~33, 33~43, 43~53 mm. This means ## mm or more and less than ## mm. When ordering, it is necessary to clearly indicate the door thickness dimension.

Note 1: Indicate the thickness at the part where the knob rose, cylinder, thumbturn, and other parts are installed. As shown in the figure at right, when the vertical frame of the door has a different thickness at the door end, be sure to indicate dimension ③ as the door thickness.



Gap

This is the size of the gap between the door end (front end of the lock) and the edge surface of the frame (end of the strike plate). Ordinarily, a suitable gap is considered to be around 3~6 mm. For an automatic locking device, electric lock, or similar lock, ordinarily a gap of 6 mm or less is prescribed so that the trigger bolt can operate correctly.

Handing

1) Lock handing (R-type, L-type)

Depending on the lock model, there may have handing (R-type, L-type) according to the direction of the door (left-hinged or right-hinged, out-swinging or in-swinging).

<Locks that have handing (R-type, L-type)>

1. Push-pull locks (Note 2).. PX, P XK, PZ, PZK
2. Hotel locks AHL-9, AH-9
3. Hotel card locks JCLM, JCLM2
4. Anti-panic locks..... AHLP, AHP, HLP, HSP, HLTP, HSTP

● Corresponding table

How to determine lock handing as shown below.

Lock handing	Illustration	
R-type (UL type) (Note 2)	<Right-hinged, out-swinging>	Or <Left-hinged, in-swinging>
L-type (UR type) (Note 2)	<Left-hinged, out-swinging>	Or <Right-hinged, in-swinging>

* This figure shows the conditions when looking down from the ceiling towards the floor.

Note 2: Some push-pull locks also available for in-swinging doors. The in-swinging doors are indicated as UR and UL.
In this case, the lock body, handle, and other parts are special parts for in-swinging doors.

2) Lever handle handing

Depending on the shape, there may have handing (R-type, L-type). How to determine lever handle handing as shown below.

Lever handle handing	Corresponding table (Illustration)	
R-type	<Right-hinged, out-swinging> Lever fastening screw (Note 3)	Or <Left-hinged, in-swinging> Lever fastening screw (Note 3)
L-type	<Left-hinged, out-swinging> Lever fastening screw (Note 3)	Or <Right-hinged, in-swinging> Lever fastening screw (Note 3)

Note 3: For security reasons, the lever handle fastening screw must be on the inside.

Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

Electric locks

Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

Electrical
conductors,
Control
boxes

Dimensions



GOAL Lock Function Numbers / Ordering Information

Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door
locks

Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

Electrical
conductors,
Control
boxes

Dimensions

GOAL Lock Function Numbers (* Functions and operations may differ depending on the model, such as for emergency locks. Refer to the model number table for the specific model for more information.)

Function Number Classification	Illustration	Operation (Applications)		Function Number Classification	Illustration	Operation (Applications)	
		Models With This Function				Models With This Function	
1 Passage latch	(Inside) (Outside)	Not equipped with a locking function. (For interior partitions that do not need to be locked)		5 (ND) Cylinder lock with indicator	(Inside) (Outside) Indicator	Equipped with a locked (red) and unlocked (blue) indicator. Cannot be unlocked without a key. (For toilet stalls in commercial and public facilities)	
3 Exit lock		Can be locked/unlocked only from inside. Cannot be locked/unlocked from outside. (For terrace doors, etc.)		6 Double-cylinder lock		Can be locked/unlocked from inside/outside with a key. (For common entrances, connecting doors, etc.)	
33 Double-thumbturn lock		Can be locked/unlocked from either side. (For interior partitions, meeting rooms, etc.)		7 Outside lock		Cannot be locked/unlocked from inside. Can be locked/unlocked from outside with a key. (For classrooms, hospital rooms, storerooms, etc.)	
4 (Without indicator) 45 (With indicator) Partition lock (With emergency cylinder)	Without indicator (4) / With indicator (45) / Emergency unlock device (Emergency cylinder)	Can be locked/unlocked from inside. Emergency cylinder can be unlocked from outside. (Children's rooms, bathrooms, toilet stalls, etc.)		8 Storeroom lock	Trigger bolt	Outside lever handle/knob is always fixed. Can be opened anytime from inside. Can be freely opened from inside. (For hotels, storerooms, equipment rooms, etc.)	
49 Bathroom lock (with construction key)	Chip key / Emergency unlock device (Emergency cylinder) / The ULW-49*BL features mounting screws exposed outside the room.	Partition lock with a locking function that can be unlocked with a key during construction. After construction, the lock will be equipped with an emergency unlock function by inserting the chip key to the cylinder. After that, the emergency cylinder can be unlocked by using a coin in emergency situations. (For bathroom)		82 84 85 Office lock	82) ... Push-button / 84) ... Turn-button / Button (for automatic locking) / Trigger bolt	Can be locked/unlocked from inside with the thumbturn or from outside with a key. Can also be locked automatically by operating the knob button on the inside. (For office entrances, etc.)	
5 Entrance lock (Cylinder lock)		Can be locked/unlocked from inside. Can be locked/unlocked from outside with a key. (Cylindrical lock can be locked using the button.) (For main entrances, etc.)		9 Hotel lock	Indicator / Trigger bolt / Escutcheon	Outside lever handle/knob is always fixed. Can be unlocked with a key. Can be opened anytime from inside. Cannot be unlocked with a maid key when double-locked (shut out) from inside. (For hotel guest rooms, etc.)	

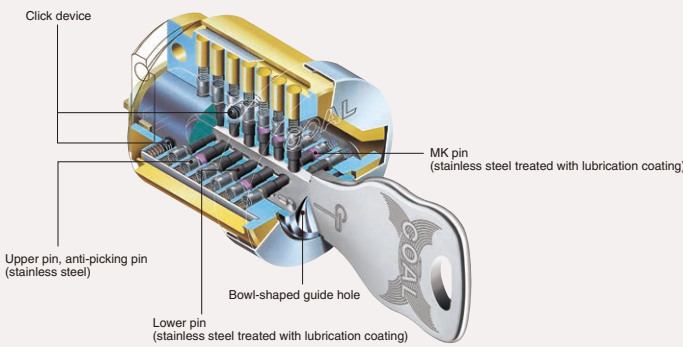
Include the following information when ordering or designating a GOAL lock.

Model		Lever handle / knob design, finish symbol, escutcheon, etc.	Hand	Backset (mm)	Door thickness (mm)	Door type	Door material	Remarks (such as keying system)
Cylinder symbol (Note)	Series / Function number							

(Examples) Note: When ordering, include the cylinder symbol with the model. (GP: GP cylinder, V: V18 cylinder, GV: GV cylinder, P: 6-pin cylinder, Z: 7-pin cylinder)

(Ex. 1)	LX	1	BU 40A (R4U)		51	30	Single-leaf door	Wooden door	
			BU lever, dull alumite silver BU (R4U) rose						
			LX lever handle with passage latch						
(Ex. 2)	GV-LG	5	NU11S N5UW		64	36	Single-leaf door	Aluminum sash	With UKS2 (Universal Key System) Common strike plate
			NU lever, dull stainless steel, N5U escutcheon (both sides)						
			LG lever handle lock (GV cylinder)						
(Ex. 3)	V-AHP	5	Q11S	R	76	40	Double-leaf door	Steel door	Key change system with master key
			Q type knob, dull stainless steel						
			R type (for out-swinging right-hand door or in-swinging left-hand door)						
			AHP mortise lock (Anti-panic lock) (V18 cylinder)						
(Ex. 4)	GP-LG	5	NU11S (R4U)	R	64	40	Single-leaf door	Steel door	ND cylinder, with master key system Construction key system
			NU lever Dull stainless steel (R4U) rose						
			R type (ND cylinder on right side when seen from lock front (door end))						
			GP-LG lever handle lock (GP cylinder)						
(Ex. 5)	GP-EURP	7	CC	L	76	36	Double-leaf door	Steel door	
			Cup handle on both sides						
			L type (for out-swinging left-hand door or in-swinging right-hand door)						
			EURP function-switching electric lock with anti-panic function (GP cylinder)						

● Illustration of GP cylinder structure



● GP cylinder front



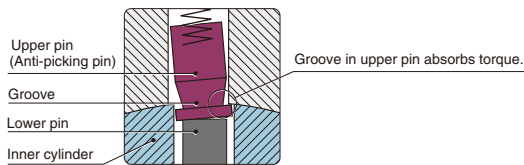
● GP cylinder dimple key



18 high-precision pins enable 12 billion key differences. This is an original security design that is highly resistant to picking and other methods of illegal unlocking.

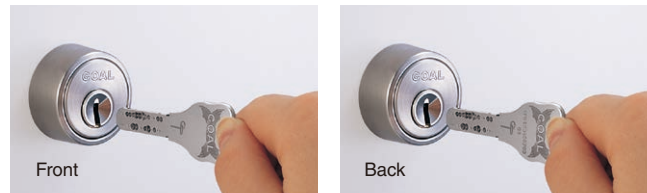
Features

■ 18 high-precision pins are arranged in 3 rows. In addition, all of the upper pins are anti-picking pins, making picking nearly impossible.



- The number of key differences is 12 billion.
- CNK, GGMK, GMK, MK and RMK is available.
- The use of MK pins (master key pins) makes these locks compatible with large-scale and complex key systems.
- All pins are made of stainless steel and treated with a special lubrication coating. This provides an impressive increase in strength and durability.

■ The dimple key uses a key form that is easy on the fingers. Insertion and removal are extremely smooth, and the key is reversible so it can be inserted facing either way.



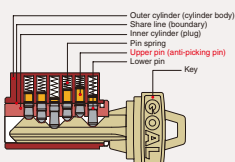
- The bowl-shaped guide hole makes it easy to insert the key.
- Operability is further improved with the use of a click device.
- Durability has been impressively improved. An impressive increase in durability was achieved with the dimpled key, special lubrication coating on all lower pins, the special click device, and other improvements.

6-pin, 7-pin cylinders [Symbol: P]

6-pin cylinders [Symbol: P]

7-pin cylinders [Symbol: Z]

● Illustration of 6-pin cylinder structure



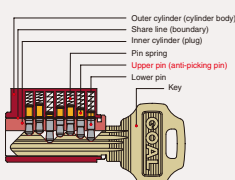
● 6-pin cylinder front



● 6-pin cylinder key



● Illustration of 7-pin cylinder structure



● 7-pin cylinder front



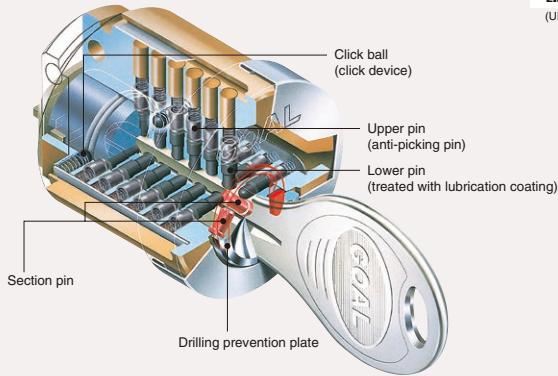
● 7-pin cylinder key



- These are high-precision 6-pin and 7-pin cylinders. In addition, all of the upper pins are anti-picking pins, making picking and other methods of illegal unlocking extremely difficult.
- The maximum number of key differences with a 6-pin cylinder is 1 million.
- The maximum number of key differences with a 7-pin cylinder is 18 million.
- The use of a click device and a special lubrication coating on all lower pins allow smooth key insertion and removal.

Note: Production of new master key systems for 6-pin and 7-pin cylinders discontinued as of March 2017.

● Illustration of V18 cylinder structure



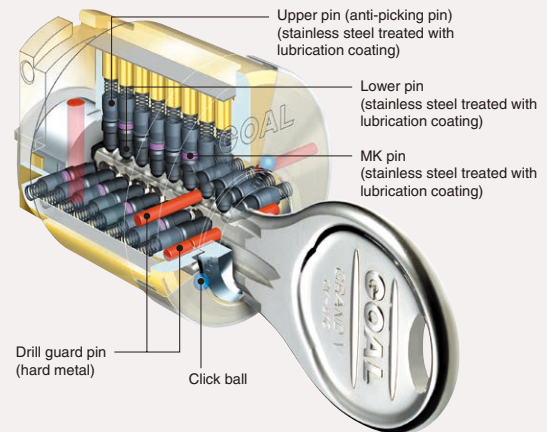
● V18 cylinder front



● V18 cylinder dimple key



● Illustration of GRAND V (GV) cylinder structure



● GV cylinder front



● GV cylinder dimple key



18 high-precision pins enable 12 billion key differences.
This security design is highly resistant to picking and other methods of illegal unlocking.

Features

- Products which have been registered under the U.S. UL security standard (UL437) are also available.
- 18 high-precision pins produce 12 billion key differences.
- Various key systems including master key (MK) systems and construction key (CNK) systems are available.
- Picking, impression, and other methods of illegal unlocking are nearly impossible.
- The robust design prevents drilling.
- All pins are made of stainless steel and treated with a special lubrication coating. This produces an impressive increase in strength and durability.
- The key form is easy on the fingers. Insertion and removal are extremely smooth, and the key is reversible so it can be inserted facing either way. A bowl-shaped guide hole is also provided.
- Operability is further improved with the use of a click device.
- As an option, a key change (V, GV-KCH) system is also possible. (See P.14 for details.)

The immense 1,000 trillion and 280 billion number of key differences results in an ultra-secure design that makes picking and all other methods of illegal unlocking nearly impossible.

Features

- The maximum 5 levels and 24 columns of pins produce an incredible 1,000 trillion and 280 billion number of key differences.
- Various key systems including master key (MK) systems and construction key (CNK) systems are available.
- Picking, impression, and other methods of illegal unlocking are nearly impossible.
- The use of MK pins makes these locks compatible with large-scale and complex key systems.
- The robust design prevents drilling.
- Although the locks use dimple keys, the keyway section has a complex shape that makes the insertion of picking or other tools difficult.
- All pins are made of stainless steel and treated with a special lubrication coating.
- The security ID tag system makes it possible to carefully check for key duplication. (Standard specifications)
- The key form is easy on the fingers. Insertion and removal are extremely smooth, and the key is reversible so it can be inserted facing either way. A bowl-shaped guide hole is also provided.
- Operability is further improved with the use of a click device.

<Security ID tag>





Key systems

Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

Electrical
conductors,
Control
boxes

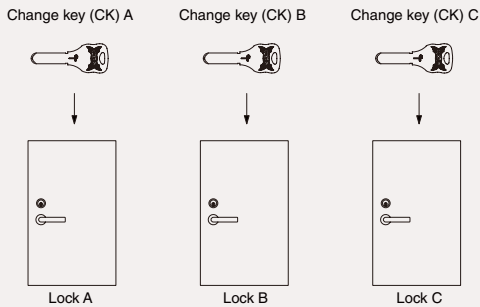
Dimensions

Increasingly complex and advanced key management systems are required in recent years due in part to increasing building heights. In order to satisfy these requirements, a wide range of key systems can be constructed with GOAL pin cylinders, including the following. These can be used in combination to create the optimal key management system according to the key system purpose.

<Caution> All keys are important items for protecting the safety and property of the customers. Exercise full caution to avoid losing them. When lost a key, replace the cylinder. Can be used without replacing the cylinders in case key change systems or Universal key systems are equipped. (Refer to P.14~15.)

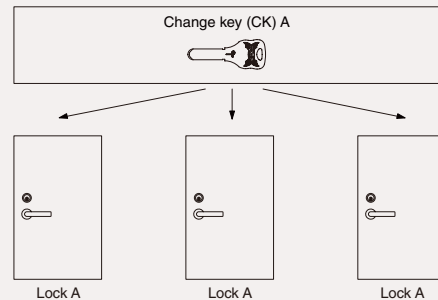
1. Change key <CK>

The individual unique keys for each lock are referred to as change keys (CK).



2. Keyed alike system <KA>

This system uses the same key number for multiple lock cylinders, and allows a single change key to lock and unlock all locks in that group.



3. Master key system <MK>

This system allows a single master key (MK) to lock and unlock multiple locks which are each equipped with their own different keys.

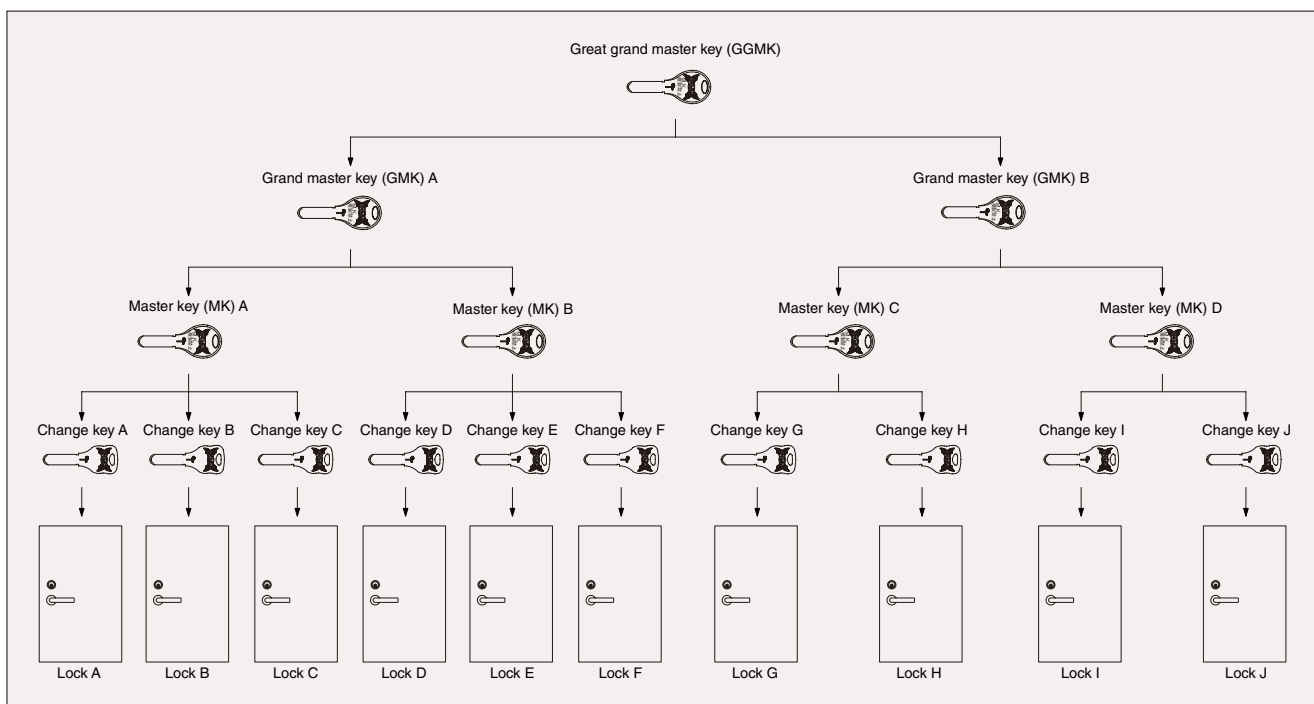
<Note> Production of new master key systems for 6-pin and 7-pin cylinders discontinued as of March 2017.

4. Grand master key system <GMK>

This system allows a single grand master key (GMK) to lock and unlock all the locks in multiple master key groups which are each equipped with their own unique master keys.

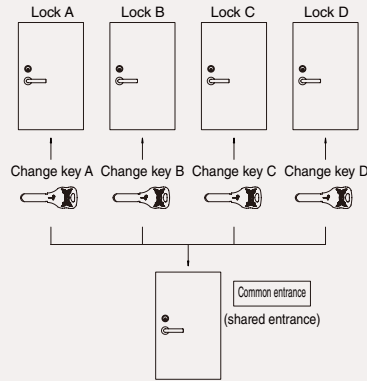
5. Great grand master key system <GGMK>

This system allows a single great grand master key (GGMK) to lock and unlock all the locks in multiple grand master key groups which are each equipped with their own unique grand master keys.



6. Reverse master key system <RMK>

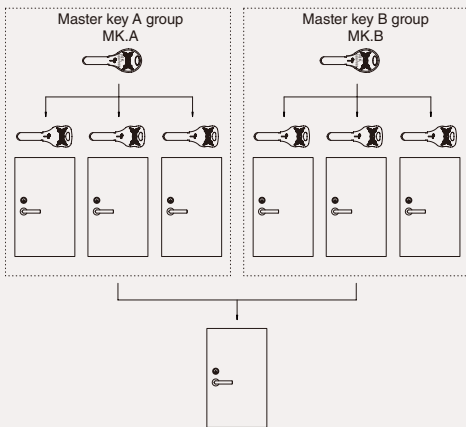
RMK is keying system that permits a lock to be opened with a number of unique, individual keys. For instance, each key (CK A~D) can individually operate its own lock. And cylinder of common entrance can be operated by CK A~D as shown below.



7. Cross master key system <CMK>

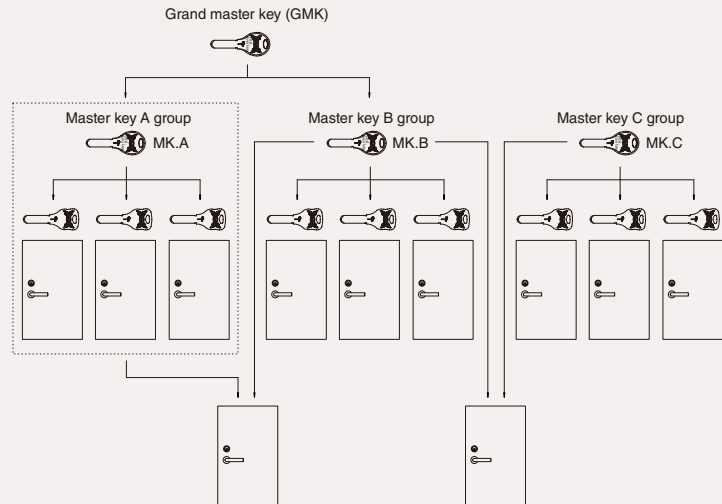
The designated lock can be locked and unlocked using the master keys and change keys belonging to multiple different master groups, this system is referred to as a cross master key system (CMK).

<Example of simple cross master key system>



Both master keys A and B and all change keys can lock and unlock the designated lock.

<Example of complex cross master key system>



The grand master key, master key A and the change keys of that group, and master key B can lock and unlock the designated lock.

The grand master key, master key B, and master key C can lock and unlock the designated lock.



Key systems

Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

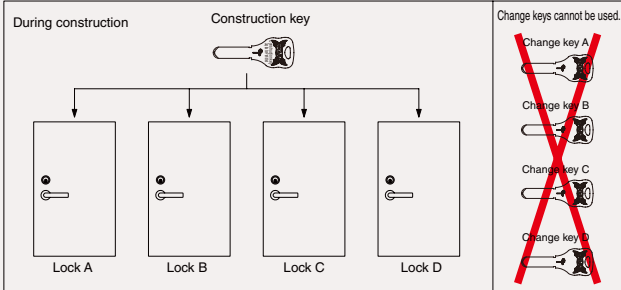
Electrical
conductors,
Control
boxes

Dimensions

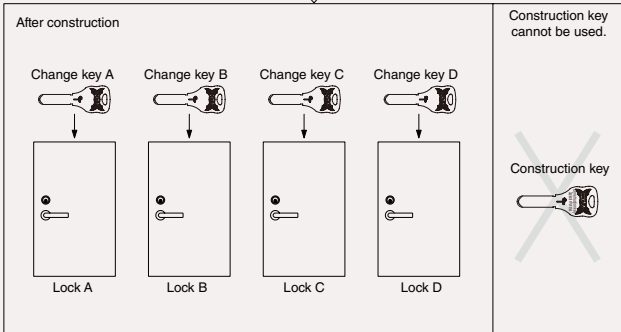
8. Construction key system <CNK>

With this system, the keys that were used for management during the building construction period are automatically disabled after construction is completed without changing the locks and cylinders. Thereafter the locks can be locked and unlocked only with the new keys that were delivered to the client or residents. The keys that are used during the construction period are known as construction keys (CNK).

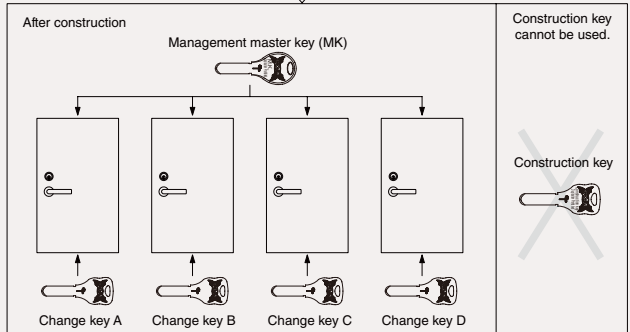
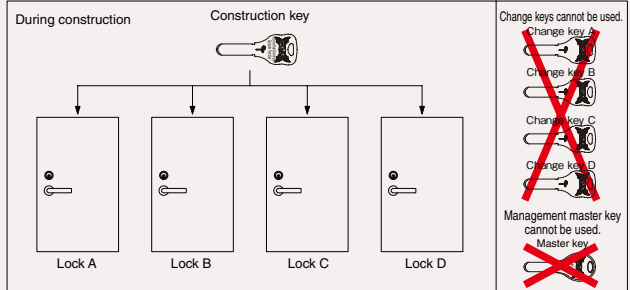
① When a master key <MK> system is not needed after construction is completed



↓ Cancellation of construction key system (Canceled automatically by operation of the change key.) ↓

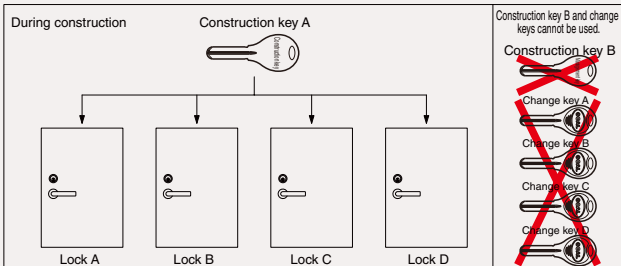


② When a master key <MK> system is needed after construction is completed

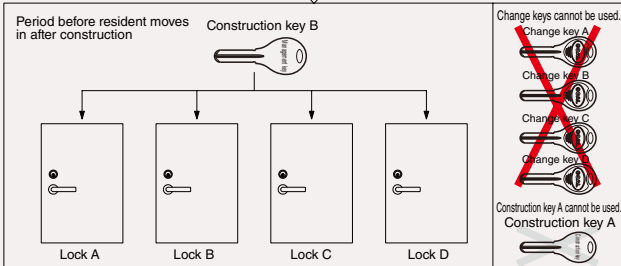


③ Double construction key system <DCNK>

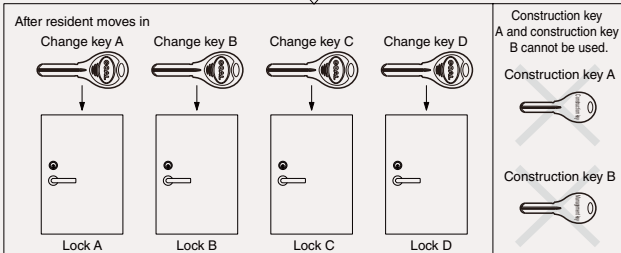
(Available V18, GV cylinder only)



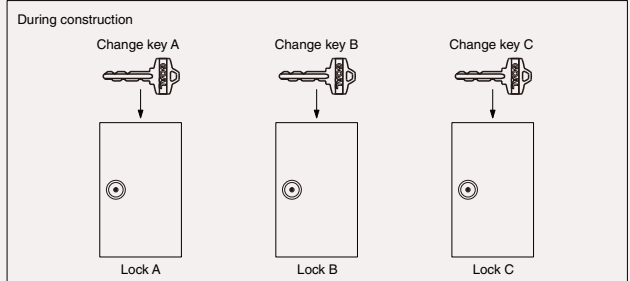
↓ Cancellation of construction key system A (Canceled automatically by operation of construction key B.) ↓



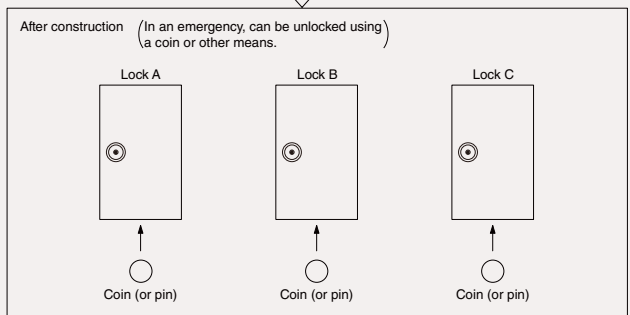
↓ Cancellation of construction key system B (Canceled automatically by operation of the change key.) ↓



④ Construction key system for bathrooms (49 cylinders)



↓ Cylinder function is canceled by a particular operation. ↓



<Models equipped with 49 cylinders>

- Cylindrical locks ULW-49, 49BL

* A special key system for hotel locks is also available. See P.31 for details.



Key change (V18, GV-KCH) system (option spec.)

(Our original key system)

Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

Electrical
conductors,
Control
boxes

Dimensions

V18 or GV cylinder key change (V18, GV-KCH) system (option spec.)

This key change system delivers major improvements to key management safety and cost reductions by making it possible to change keys without changing the locks at times such as when a key is lost or a resident moves in or out. Another large feature is that even when a master key (MK) system is installed, the MK and change keys (CK) can be changed.

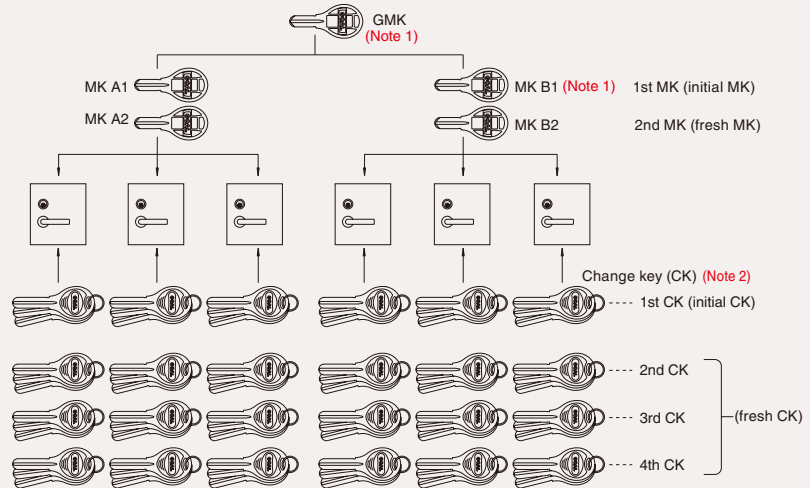
① Master key (MK) supporting type: V (or GV)-KCH-M system (for buildings and apartments where a MK system or other key system is installed)

<V(GV)-KCH-M system example (1)>

* This figure shows an example equipped with a GMK system where the MK can be changed once and the change keys (CK) can each be changed 3 times.

<Features>

- Key changes for the change keys and MK are possible.
- Even when the MK was changed, the same GMK and change keys (CK) can continue to be used. (In the same way, even when the change keys (CK) were changed, the same MK and GMK can continue to be used.)
- The possible number of key changes is decided when discussing the initial key plan.
- At the time of initial shipping, only the first keys (initial keys) are set.
- The second and later keys for key changes (fresh keys) are shipped after they are ordered.

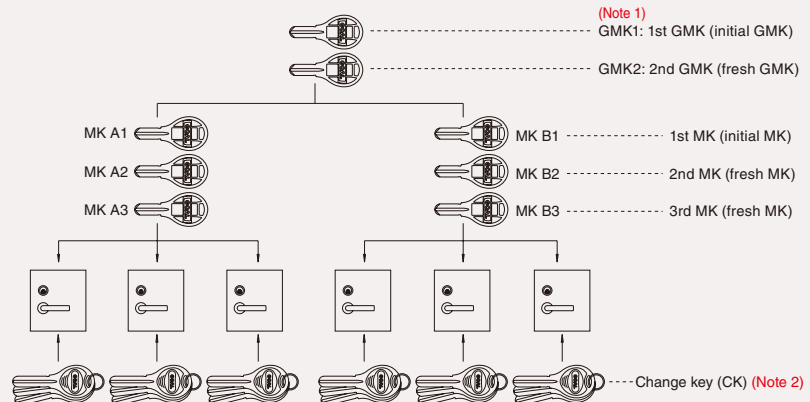


<V(GV)-KCH-M system example (2)>

* This figure shows an example of a system where the GMK can be changed once and the MK can be changed 2 times.

<Features>

- Key changes for the GMK and MK are possible.
- Even when the GMK or MK was changed, the same change keys (CK) can continue to be used. (The other features are the same as system example (1) above.)



Note 1: The number of GMK and MK is decided based on consultation.

Note 2: With standard specifications, the number of change keys (CK) is a set of 3.

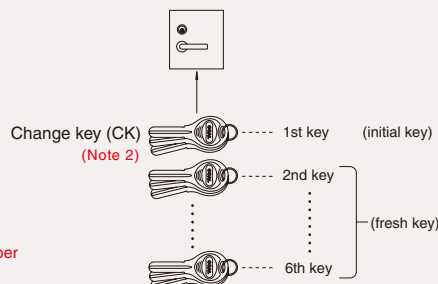
② Change key (CK) supporting type: V (or GV)-KCH-BE system

This is an individual key change system.

<Features>

- Key changes for the change keys (CK) are possible.
- The number of possible key changes is 5 for V18 and 6 for GV.
- The second and later keys for key changes (fresh keys) are shipped after they are ordered.

<(or GV)-KCH-BE system example>



Note 2: With standard specifications, the number of change keys (CK) is a set of 3.

GP master key change system (option spec.)

With GP cylinders, it is possible to add an optional key change system for master keys. However be aware that the number of possible key changes is only 1 and key changes for the change keys are not possible.



GV Cylinder Universal Key System® (UKS2) (Option)

(Our original key system) (Pat.) (* Patents obtained in the US, Canada, China, South Korea, and Taiwan in addition to Japan.)

▼ Information

Precautions
Table of contents /
Product list
Basic information

Cylinders
Keying
systems

▼ Locks

Push-pull
locks

Lever
handle
locks

Mortise
locks

Integral
locks
Cylindrical
locks

Rim dead
locks

Dead locks
Cremon
locks
Glass door
locks

Emergency
locks
Cup handle
locks

Sliding
door locks

▼ Electric locks
Security systems

Ten-key
pads

Key switches
Interlock /
emergency
door
systems

Hotel card
locks

Electric
locks

Electrical
conductors,
Control
boxes

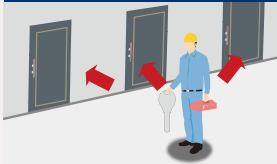
Dimensions

GV Cylinder Universal Key System® (UKS2) (Option)

The most significant feature of this system is the ability to switch over keys numerous times without changing cylinders or locks, such as when a key is lost or when a resident moves in or out.

<Application example>

A During construction



All cylinders can be operated with this key during construction.

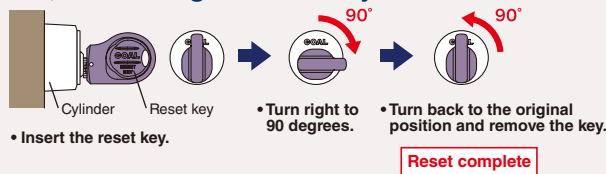
* Be sure to discard this key after construction is completed.

(When using the optional reset tool (reset tool specification), reset) by using both the construction key and the reset tool. (Note 1)

B After construction (Note: If a resident has been decided, set using the resident key.)

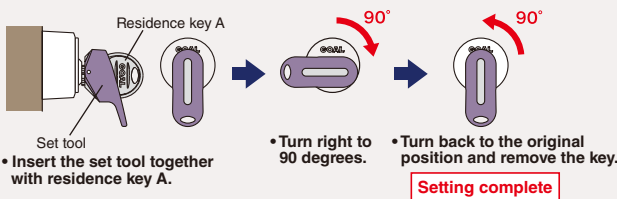
<Setting>

1 First, reset using the reset key. (Note 1)



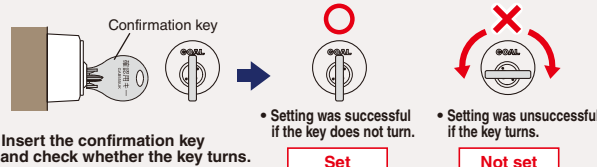
2 Next, set using the set tool and residence key A.

Use the set tool together with residence key A.



3 Be sure to check the setting state after completion using the confirmation key.

Use the confirmation key to make sure the lock has been set. If set properly, the confirmation key will not turn. If the confirmation key turns, set again beginning with resetting.



• The manager gives residence key A to Resident A.
• Resident A uses residence key A.

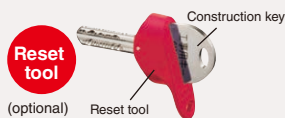
Residence key A
Resident key



<Optional specifications (reset tool specifications)>

(Note 1)

To reset using the reset tool (optional), use the reset tool together with the construction key to reset.



To set residence key A, use the set tool together with residence key A as specified above.



(Note 2)

When a resident moves in or out of a residence, the lock must be changed from residence key A to residence key B. Use the reset tool together with residence key A to reset the lock, and then set using the set tool together with residence key B.



(Note 3)

* Setting all unoccupied residence locks for use with residence key Z makes it possible to manage all vacant rooms with only residence key Z.

C Resident changeover (Changing from residence key A to residence key B)

1 First, reset using the reset key.

(Reset by performing the same method as above.)

2 Next, set using the set tool and residence key B.

• Set using the set tool and residence key B (for use by the new resident). (Set by performing the same method as above.)
Note: If the lock is set for use with residence key B, the original residence key A will no longer be usable.

3 Check the setting state.

• Be sure to check the setting state after completion using the confirmation key. (Check by performing the same method as above.)

Residence key B
setting complete

Residence key B
Resident key



Resident B



D Using a master key (optional)

• An optional master key can be set to a UKS2 system.

• A master key can be used to operate all cylinders in a group regardless of the setting state.



* Using the set tool together with the master key will force any currently used residence key into a "Shut-out" state.

