

Pulsetronic® Electronic Safe Lock

Installation Instructions

The Sargent & Greenleaf Pulsetronic Combination Lock represents a major leap forward in lock technology. Read and follow all of the instructions in this booklet carefully to obtain the best possible installation and performance of your lock and maintain your warranty.

MOUNTING CONSIDERATIONS

- Sargent & Greenleaf's Pulsetronic lock has been designed to use the same mounting screw locations and occupy approximately the same space as a standard S&G 6730 mechanical lock.
- The Pulsetronic is designed to be used on safes that do not have spindle holes through their doors. If one exists, S&G strongly recommends you fill it in a manner that makes it as strong or stronger than the surrounding door material.
- **Modifications to the lock are not recommended, and will void the manufacturer's warranty.**
- The Pulsetronic safe lock is available in left-hand and right-hand models. Make sure your lock is correctly handed for your safe. Handing is explained in these instructions.
- Batteries should be installed according to the outline drawings on the lock body before you begin installation. It may be more difficult to install batteries after the lock is mounted in the safe. See the battery installation procedure inside this booklet.
- **Always leave the safe door open during all phases of lock installation. It is wise to block the door open so that it cannot be accidentally closed. Following installation, all lock functions should be checked according to the procedures printed in the Operating Instructions. Only then should the safe be closed and secured.**



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APPLICATION NOTES. . .

The Pulsetronic lock uses a completely new technology to secure your safe. The keypad communicates with the lock using audible sound heard as a series of “knocks.” Because the transmission of sound is critical to the operation of the lock, it is important to make sure the safe construction is compatible with Pulsetronic technology. Some safes transmit sound better than others. For instance, heavily insulated safes and very light sheet steel containers typically do not transmit sound clearly. Insulated safes tend to muffle sound, while lightweight containers produce echoes. The only way to be absolutely sure the Pulsetronic is compatible with a particular safe is to mount the lock and check for proper, consistent operation. Upon taking delivery of a Pulsetronic equipped safe or upon completing an installation, perform each of the following tests (found in the Operating Instruction Booklet) before storing anything in the safe:

1. Perform the ***Auto Sensitivity, Linking, and Opening*** procedures **three times** while the **safe door remains open**.
2. Perform the ***Auto Sensitivity, Linking, and Opening*** procedures **three times** with the safe door closed, but the **handle in the open position**.
3. Perform the ***Auto Sensitivity, Linking, and Opening*** procedures **three times** with the safe door closed and locked, **ensuring that the door can be opened at the end of each of the three tries**.

The Pulsetronic is an Underwriters Laboratories Listed Type 1 lock for use on all safes.

The Pulsetronic lock is warranted to be free of defects in materials and workmanship for a period of one year from date of manufacture. This warranty applies only to the condition of the product at the time it left S&G's factory. Subsequent damage, such as might occur in shipping or installation, is not covered. Likewise, problems associated with improper installation (including application to a safe with marginal sound transmission properties) are not covered by S&G's warranty.

INSTALLATION NOTES. . .

Although the Pulsetronic is easy to install, we recommend the following procedures be performed only by an experienced locksmith or safe technician. Your safe may incorporate relocking devices that are attached to the lock. Misalignment or detachment of these devices can result in a lockout—a condition where the safe cannot be opened without damage.

ADDITIONAL ITEMS YOU WILL NEED . . .

Many installations can be performed with nothing more than a medium phillips screwdriver and a small flat blade screwdriver. If the manufacturer of your safe has made external relock device attachments to the lock, specialized tools and knowledge may be required.

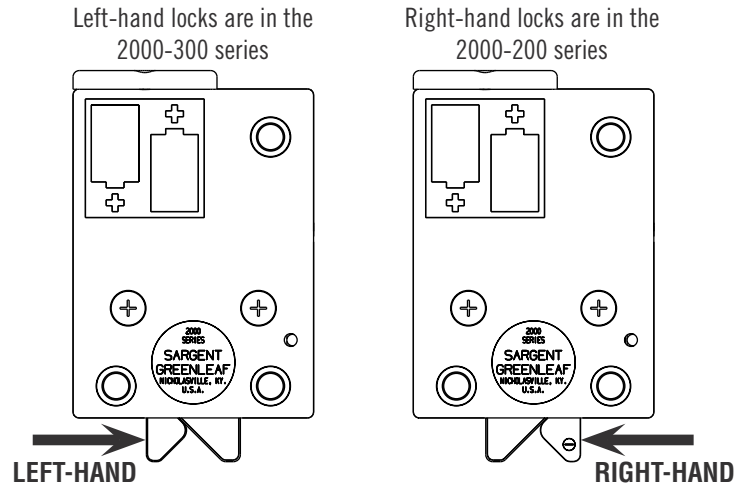
LOCK INSTALLATION. . .

Step 1

The Pulsetronic safe lock is available in left-hand and right-hand models. The hand of the lock must be correct for the direction of boltwork travel in your safe.

These illustrations show the direction of boltwork travel that requires a left-hand lock, and the direction of boltwork travel that requires a right-hand lock.

Once you are sure you have the correct model of Pulsetronic for the safe, you may want to install the lock battery pack, following the instructions that start on page 6 of this booklet. It is much easier to install the batteries before the lock is mounted to the safe door.



Step 2

The safe's mounting plate should be smooth and flat, with 1/4-20 or M6-1.0 mounting screw holes. Both standard and metric mounting screws are provided. 1/4-20 screws are silver colored. M6 screws are tinted yellow for easy identification.

This safe's boltwork travels from right to left below the lock. It requires a right-hand Pulsetronic. Note that there is no spindle hole in the mounting plate.

The mounting surface of the Pulsetronic must be in direct contact with a metal surface. Otherwise, the lock's ability to receive audio signals from the keypad will be impaired, and the lock may only work intermittently or not at all.

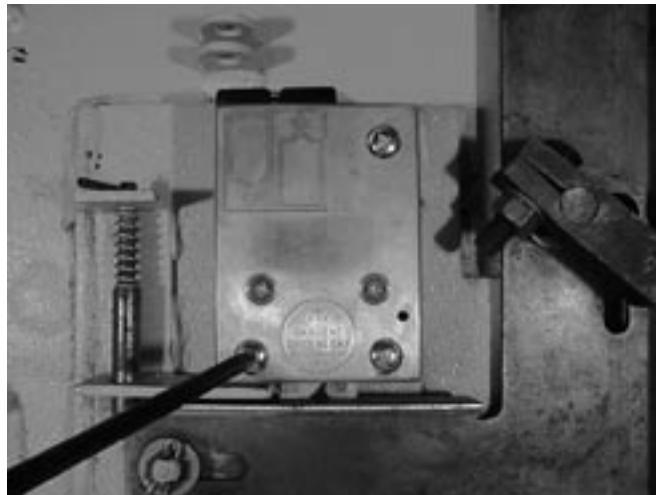


Step 3

Do not try to remove the material that looks like cellophane from the Pulsetronic's audio pickup (on the underside of the lock). This is permanent moisture barrier material.

Lock installation is simply a matter of using either the standard or metric screws to fasten the Pulsetronic lock securely to the safe's mounting plate. Make sure the lock is tight against the safe.

With the safe handle turned to the fully locked position, the Pulsetronic lock bolt should be fully extended and deadlocked. The safe handle should still have a small amount of play, but should not be able to retract the boltwork.



Step 4

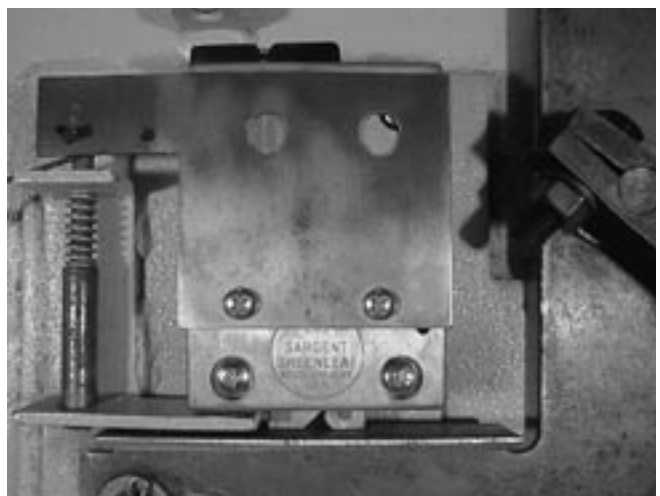
This view of the end of the Pulsetronic lock bolt shows how it engages a cutout in the safe's boltwork to block it from moving. Note that there is clearance on all sides of the Pulsetronic bolt when the safe is locked. This ensures smooth operation of the lock and the safe's boltwork.



Step 5 (FOR SAFES WITH RELOCK DEVICES)

The Pulsetronic does not require a hole through the safe for wires or a spindle, so relock devices are not required. However, the safe design may incorporate them.

This is an installation that requires attachment of the safe manufacturer's relock device plate to the lock using the cover screws. If your situation is similar, be sure the thickness of the relock device plate(s) is not great enough to prevent the screws from engaging the lock case by at least four threads. If necessary, use longer, flat head machine screws to insure proper fit. The relock device plate must be held securely in place to keep the relock device in check during normal safe operation.



KEYPAD INSTALLATION. . .

Mounting Options

The keypad has a magnetic back. You can simply place the keypad against the metal surface of the safe, where it will remain until you remove it.

The keypad can also be attached to the safe in a more permanent fashion using one of the two following options.

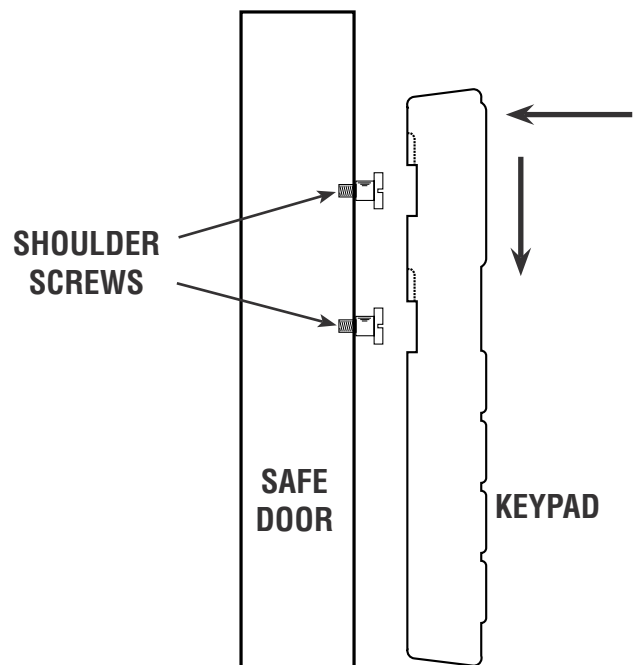


Shoulder Screw Mounting

The back of the Pulsetronic keypad contains two "keyhole" slots. Two shoulder screws can be installed in the front of the safe, spaced identically to the keyhole slots. The keypad can be placed over the protruding sections of the shoulder screws, then slid slightly downward, trapping the keypad and fastening it to the safe. To remove the keypad, pull it up slightly, then away from the safe.

Shoulder screws are provided in both standard 8-32 and metric M4-0,7 sizes. The standard screws are silver colored, and the metric screws are tinted yellow for easy identification.

If you are drilling and tapping holes in the safe to accommodate the shoulder screws, they should be spaced 1.625 inches, or 41,3 mm, apart. This is the same spacing used for the mounting screws that attach most S&G mechanical lock dial rings.



Through Bolt Mounting

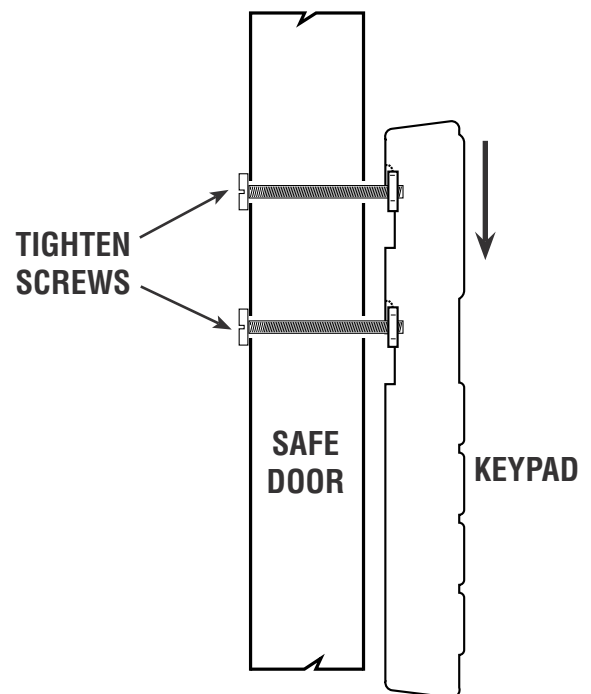
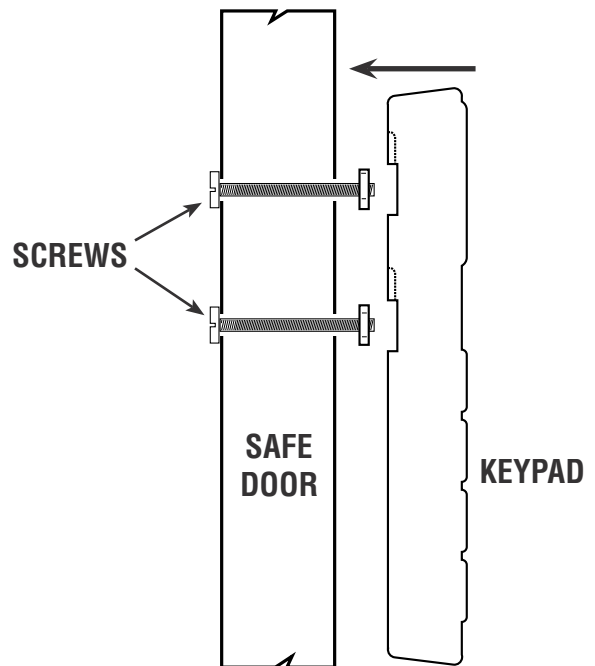
The most secure and permanent keypad mounting is achieved by drilling holes through the safe door to permit screws to hold it from inside. For this purpose, two sets of machine nuts are included; one pair of standard #6 (6-32) nuts, and one pair of M4-0,7 nuts. S&G does not supply the screws, since safe door thicknesses will vary from one application to the next.

Drill two holes through the safe door, spaced 1.625 inch, or 41,3 mm, center to center. Use a drill bit with a diameter just slightly larger than the diameter of the attaching screws you will be using.

When the screws are installed through the drilled holes, they should project no more than $\frac{1}{4}$ inch, or 6,3 mm beyond the front of the safe.

Place the appropriate nuts on the ends of the screws, then slide the keypad over the nuts. Move the keypad downward slightly to position the nuts inside the narrow ends of the keyhole slots.

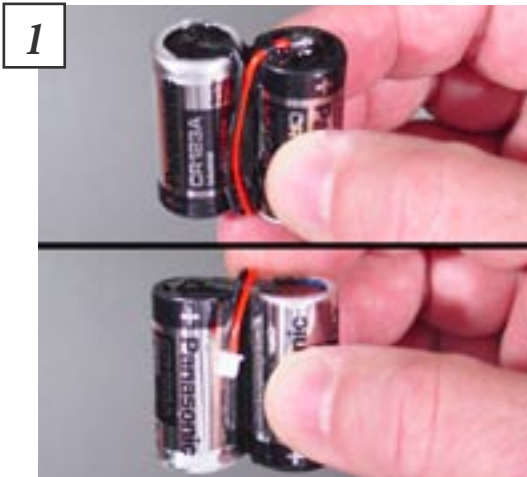
From inside the safe, tighten the holding screws until the keypad is secured to the front of the safe.



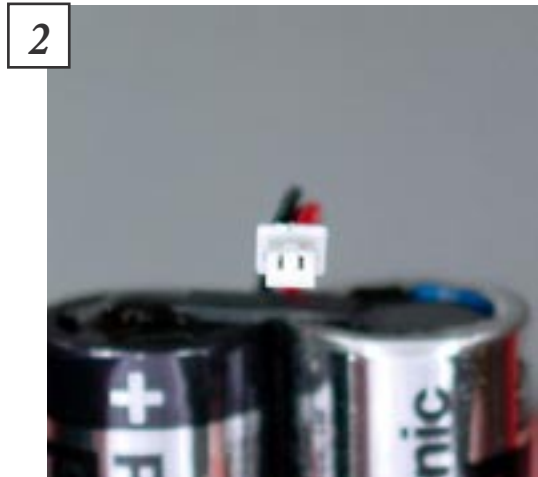
BATTERY INSTALLATION. . .

If you have taken delivery of a new safe with batteries already installed in the Pulsetronic lock body (located inside the safe door), skip this section.

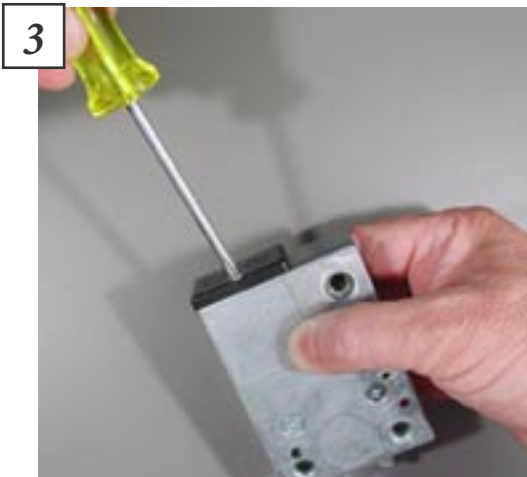
If the battery pack must be installed, you can use the following illustrated procedure. It is very likely that the lock body will be fastened to a mounting plate inside the safe door. Battery installation may require removal and re-installation of a back panel, boltwork cover, relock device, and other related hardware. Because of this, S&G strongly recommends that battery installation and replacement be performed by your safe dealer or a qualified safe technician.



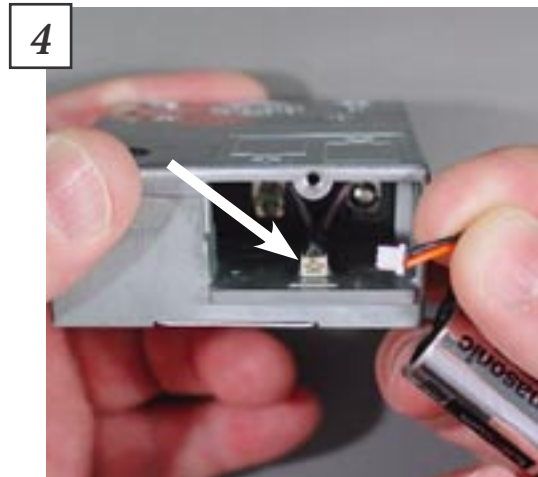
The factory supplied battery pack consists of (2) lithium batteries attached to each other, and wired to a plug-in connector.



The connector is designed with offset receptacles so that it can only be inserted into a matching connector once it is correctly oriented.



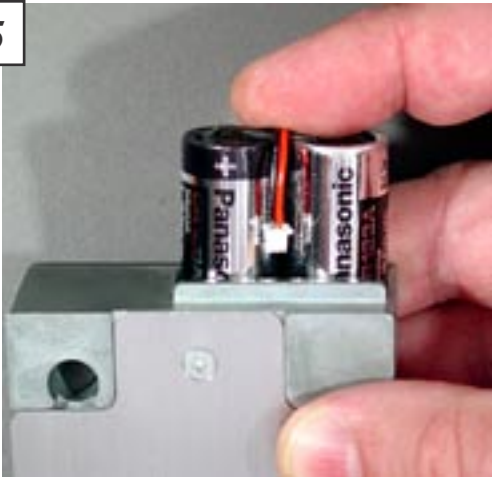
Remove the battery compartment cover. Note that the plastic cover has a tab that mates with a depression in the bottom of the battery compartment.



If you look inside the battery compartment, you will see the receptacle for the battery pack's plug-in connector. A close look at the plug and receptacle will show you how the plug must be oriented to line up correctly with the receptacle.

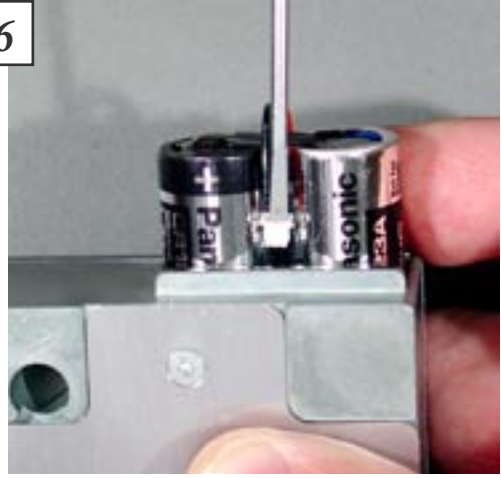
It is very difficult to force the plug into the receptacle if it is not oriented correctly. Doing so can permanently damage your lock.

5



The battery pack will slide into the lock's battery compartment. Make sure the battery wires are routed up over the top of the pack, so the connector points directly toward the receptacle inside the lock case.

6



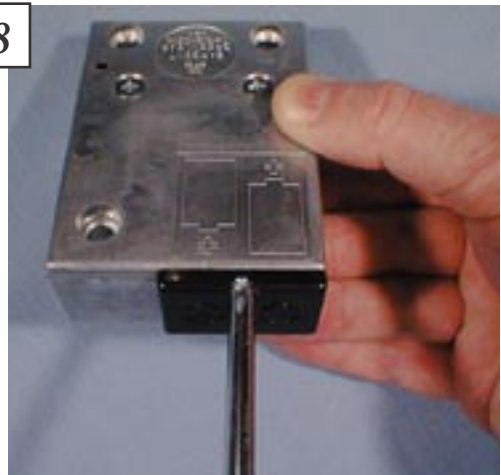
Use a small, flat blade screwdriver to guide the connector into the lock case as you continue to ease the battery pack inward.

7



When the battery pack is in the lock case far enough, use the screwdriver to push the plug-in connector into the receptacle. The lock will emit a beep when the plug makes contact.

8



Re-install the battery compartment cover and retaining screw. With the lock installed and the safe door open, place the keypad in its normal operating position and enter the following sequences:



- 7 7 # (lock emits a complex beep pattern)
- 5 5 # (lock beeps 3 times)
- 1 1 1 1 1 # (lock beeps 5 times)*

* see **Lock Activation** on the following page



LOCK ACTIVATION. . .

Your lock incorporates a counter that keeps track of how many times it's opened. This is part of the system that keeps track of the state of the batteries, and it needs to be reset when batteries are removed and re-installed or replaced with new ones. Place the keypad in the same location you normally use to open the safe, then activate the lock by using one of the two following command sequences:

If new batteries are being installed:

7 7 #	(lock emits a complex series of beeps)
5 5 #	 (the lock beeps three times)
1 1 1 1 1 1 #	 (the lock beeps five times)

If the old batteries are being re-installed:

7 7 #	(lock emits a complex series of beeps)
5 5 #	 (the lock beeps three times)
0 0 0 0 0 0 #	 (the lock beeps five times)

CHECKING THE LOCK. . .

Upon completing the lock installation, proceed directly to the Operating Instruction Booklet to check for suitability of the application and proper lock operation.

WARRANTY

Seller warrants that for one year* from the date of shipment from Seller's point of manufacture, the goods shall be free from defects in material and workmanship, provided the goods are normally and properly used according to the Seller's written instructions.

THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. S&G DOES NOT WARRANT THAT THE GOODS ARE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE EXCEPT AS EXPRESSLY PROVIDED HEREIN.

Seller's entire liability and Buyer's exclusive remedy in the event that the goods do not conform to the foregoing warranty shall be Seller's repair or replacement of the goods (including payment of freight costs to and from point of manufacture).

UNAUTHORIZED USE OF DIAL, DIAL RINGS, AND/OR SPINDLES NOT MANUFACTURED BY THE SELLER IN CONJUNCTION WITH ITS COMBINATION LOCK PRODUCTS INVALIDATES THE WARRANTY.

SELLER SHALL HAVE NO LIABILITY FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES. SELLER DOES NOT WARRANT ITS LOCK PRODUCTS TO BE IMPERVIOUS TO FORCIBLE OR SURREPTITIOUS ENTRY, AND SELLER SHALL HAVE NO LIABILITY FOR DAMAGE TO OR LOSS OF PROPERTY SOUGHT TO BE PROTECTED BY ANY SUCH LOCK.

*6120 series locks, 6730 series locks, and Environmental Padlocks carry a two year warranty.



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