

*English*

## Installation Instructions

Pushbutton Lock

7 1 0 4  
SERIES

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Please keep these instructions.

The combination of this lock has been factory preset: 2 and 4 pressed together, then 3.

**WARNING**

For your own safety, you must change the combination at the time of installation.

**PLEASE READ AND FOLLOW ALL DIRECTIONS CAREFULLY**

Since every installation is unique, carefully check windows, frame, door, etc. to ensure that the recommended procedures will not cause damage. Ilco Unican is not responsible for any damage caused by installation.

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## Tools Required

- ¼" (6 mm) Drill Bit
- 1" (25 mm) Wood Chisel
- ¾" (19 mm) Hole Saw
- Phillips-head Screwdriver
- 1" (25 mm) Drill Bit or Hole Saw
- 1¾" (35 mm) Hole Saw
- 2 Pairs of Pliers
- Hacksaw
- Hammer
- Center Punch
- Drill (variable speed)

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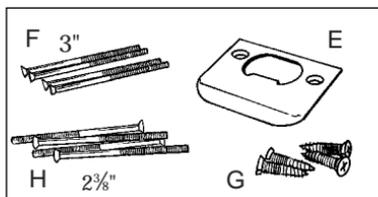
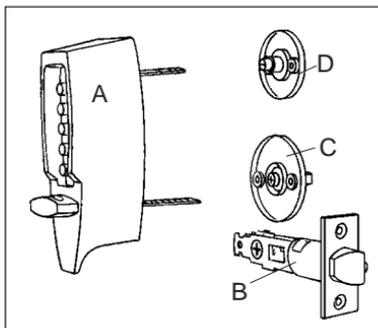
## Checklist

Use this checklist to make sure that everything has been included.

- A - Front Lock
- B - Adjustable Latch (7104)
- C - Inside Thumbturn Assembly
- D - Inside Combination Change Assembly
- E - Strike Plate

### Screw Pack:

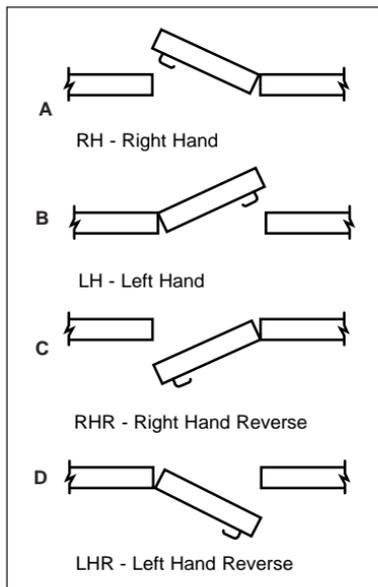
- F - 4 thru-bolts (3")
  - G - 4 combination wood/metal screws
  - H - 4 thru bolts (2 $\frac{3}{8}$ ")
- Templates (in center of booklet)



## Determine the hand of your door

Many of the installation instructions refer to the handing of your door. The hand of the door is determined with the door in the closed position, from the exterior or pushbutton side of the door.

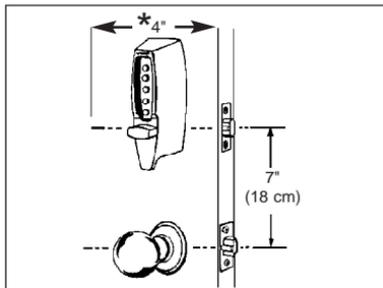
- A)** Right Hand: Door opens inward (push). Hinged on the right side.
- B)** Left Hand: Door opens inward (push). Hinged on the left side.
- C)** Right Hand Reverse: Door opens outward (pull). Hinged on the right side.
- D)** Left Hand Reverse: Door opens outward (pull). Hinged on the left side.



## 1 Determining the Lock Location

Install the lock with the exterior thumbturn at least 7" (18 cm) above your primary lock set so it is comfortable to operate and not in the way when you turn the door knob.

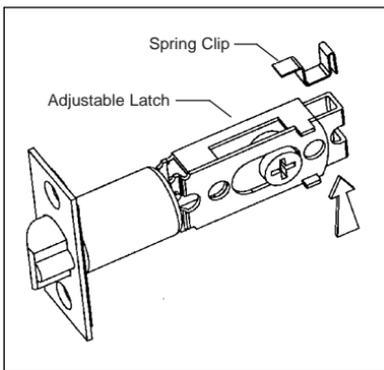
\*A minimum stile width of 4" (10.16 cm) is required for mounting, **figure 1-1**.



1-1.

## 2 Adjusting the Latch

This latch has been secured in the  $2\frac{3}{4}$ " back set position with a spring clip. If your application requires a  $2\frac{3}{8}$ " back set, remove the spring clip by utilizing a small screw driver (or similar) and inserting the tip through the latch as indicated by the arrow, and gently pressing on the spring clip until it is removed from the latch.

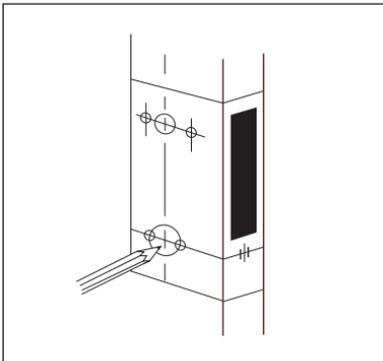


2-1.

## 3 Marking the Door

**NOTE:** Be sure to use the correct template (right-hand or left-hand door -  $2\frac{3}{8}$ " or  $2\frac{3}{4}$ ").

- 1) Carefully fold the template (found in the center of this booklet) as indicated in **figure 3-1**.
- 2) Tape the template securely to the outside of the door so that all the indicated folds are properly aligned with the edge of the door.
- 3) Use a center punch to make the marks for drilling the seven holes precisely at the points indicated on the template. The center punch mark in the edge of the door must be centered based on the thickness of the door.
- 4) Remove the template.



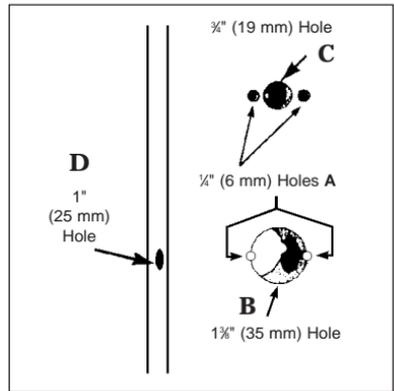
3-1.

## 4 Drilling Holes in the Door

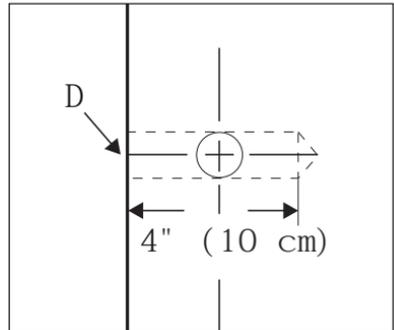
**CAUTION:** Positioning and drilling must be done straight to ensure troublefree operation of the 7100 Series lockset. Improper drilling may result in excessive force being exerted on the lock which may result in the premature wearing of its mechanical parts.

**You must do Step 1 first otherwise it will be impossible to drill the 1/4" (6 mm) holes.**

- 1) Use a 1/4" (6 mm) drill bit to drill the four holes marked A, **figure 4-1**. Begin drilling at a slow speed and increase the speed gradually until the tip of the drill bit emerges from the other side of the door. Repeat this procedure from the opposite side of the door. This technique will prevent splintering of the door or breaking the drill bit.
- 2) Use a hole saw with pilot bit to make the 1 3/8" (35 mm) hole. Apply pressure evenly until the circular blade cuts the first side of the door and the tip of the pilot bit emerges through the other side. Drill from the other side until the 1 3/8" (35 mm) hole is completed.
- 3) Repeat Step #2 for the 3/4" (19 mm) hole, (C).
- 4) The final 1" (25 mm) hole (D) is cross-bored through the edge of the door. Carefully bore 4" (10 cm) deep, **figures 4-1 & 4-2**.



4-1.



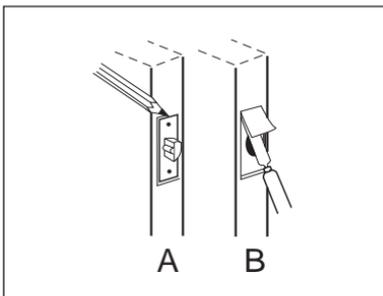
4-2.

## 5

## Making the Latch Face Plate Cutout

This procedure is applicable to wood doors.

- 1) Insert the latch into the 1" (25 mm) hole until the face plate butts up against the door edge. Draw a line around the face plate, **figure 5-1, A**. Remove the latch from the door.
- 2) For doors without a beveled edge, use a sharp 1" (25 mm) wood chisel to remove approximately  $\frac{1}{8}$ " (3 mm) of material or enough so the face plate is perfectly flush with the edge of the door, **figure 5-1, B**.
- 3) For doors with a beveled edge, follow Step 2 except the face plate will not be flush with the edge of the door, but rather square to the face of the door. In order to accomplish this, you must remove more wood from the higher edge of the door.

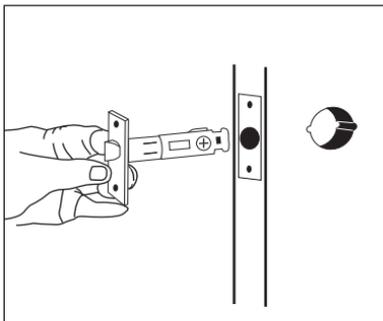


5-1.

## 6

## Installing the Latch

- 1) For doors that swing outward, the curved edge of the latch bolt should be facing inward towards the room. For doors that swing inward, the curved edge of the latch bolt should be facing outward away from the room.
- 2) Put the latch into the 1" (25 mm) hole, **figure 6-1**.
- 3) Secure the latch face plate to the door with the two Phillips-head screws provided, pg.7, H.



6-1.

## Adjusting the Lock

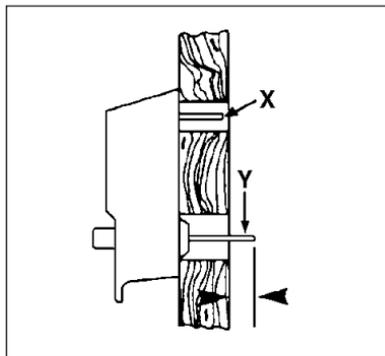
The lock has been pre-assembled to accommodate doors up to 2¼" (57 mm) thick. If your door is 1¾" to 2" (35 mm to 51 mm) thick, you must shorten both tailpieces **X** & **Y**, **figure 7-1**.

- 1) Shorten the combination change tailpiece **X** according to your door thickness. Tailpiece **X** has been premarked for various door thicknesses for accuracy and convenience, **figure 7-1**.

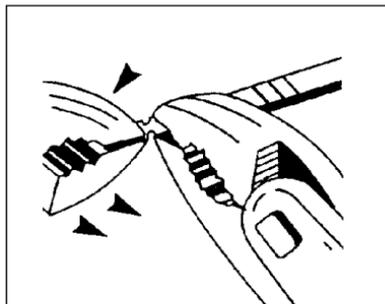
**1a.** After determining the breakoff point, hold the tailpiece firmly with a pair of pliers on the lock side of the tailpiece, just beside the desired break line.

**1b.** With a second pair of pliers, grip the tailpiece at the other side of the line and bend it up and down until it breaks, **figure 7-2**.

- 2) While holding the lockset firmly against the outside surface of the door, **figure 7-1**, mark tailpiece **Y** at the point where it extends ½ - ⅝" beyond the interior surface of the door. Shorten tailpiece **Y** using the procedure described in Steps 1a & 1b.



7-1.



7-2.

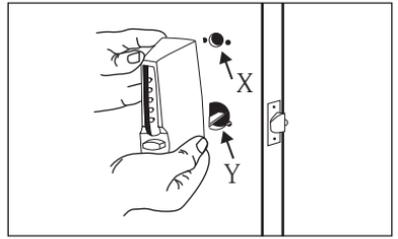
## Installing the Lock

- For  $1\frac{3}{8}$ " -  $1\frac{3}{4}$ " (33 - 44mm) thick doors, use the  $2\frac{3}{8}$ " (45mm) thru bolts.
- For 2" -  $2\frac{1}{4}$ " (51- 57mm) thick doors, use the 3" (76mm) thru bolts.

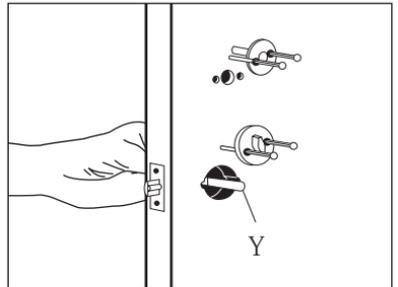
Mount the lock from the outside of the door.

- 1)** Insert the tailpiece **Y** into the horizontal cutout of the latch assembly and the tail piece **X** into the  $\frac{3}{4}$ " (19 mm) hole, **figure 8-1**.
- 2)** Hold the exterior lock assembly (pg.7, A) firmly against the door. Try the factory-set combination. Press buttons #2 and #4 together, release, press button #3, and release. A distinctive click must be felt to indicate that the button has been correctly depressed. Turn the outside thumbturn to the right (clockwise) to the stop position (the latch should be fully retracted). If not, turn the thumbturn to the left (counter clockwise) to the stop position and repeat Step 2.
- 3)** While holding the lock firmly against the outside surface of the door with one hand, use the other to mount the inside thumbturn assembly (pg.7, D) to the interior side of the door with two thru-bolts finger tight, **figure 8-2**. Make sure that tailpiece **Y** is engaged into the horizontal cutout of the inside thumbturn assembly.
- 4)** Insert tailpiece **X** into the horizontal slot of the combination change assembly, (pg.7, E). It may be necessary to use a screwdriver to align tailpiece **X** with the combination change assembly, **figures 8-2 & 8-3**. Once aligned, secure with two thru-bolts, but do not tighten, **figure 8-4**.

**Note:** The inside thumbturn is shown in a vertical position to show the two thrubolts. It may be assembled either vertically or horizontally.



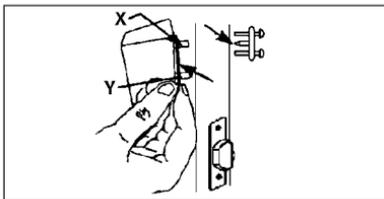
**8-1.**



**8-2.**

**IMPORTANT:** Tailpiece **X** must be inserted in the horizontal slot in order to change your combination.

- 5) Make sure that assemblies **A** and **B** are correctly centered over the holes, **figure 8-4**. Tighten the thru-bolts evenly. Uneven tension could cause a malfunction of the lock.

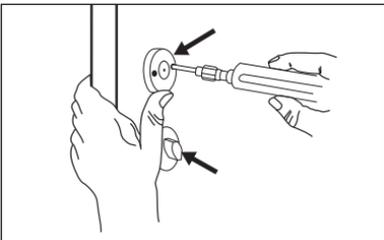


8-3.

## 9 Checking the Lock's Operation

**IMPORTANT:** The following steps **MUST** be performed while the door is open.

- 1) Turn the outside thumbturn to the left (counterclockwise) until it stops, then release it.
- 2) Press the preset factory combination (2 and 4 pressed together, release, then 3, and release). A distinctive click must be felt to indicate that the buttons have been correctly depressed.
- 3) Turn the **outside** thumbturn to the right (clockwise) until it stops; the latch should fully retract, figure 9-1. If the latch does not retract, turn the thumbturn to the left (counterclockwise) until it stops. Release it and repeat Step 2.
- 4) Release the **outside** thumbturn; the latch will return to its fully extended position.
- 5) Turn the **inside** thumbturn **A** in either direction until it stops; the latch will retract as in Step 3.
- 6) Release the inside thumbturn and the latch will return to its initial fully extended position.

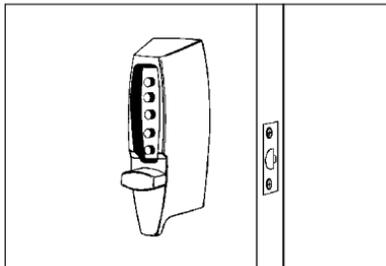


8-4.

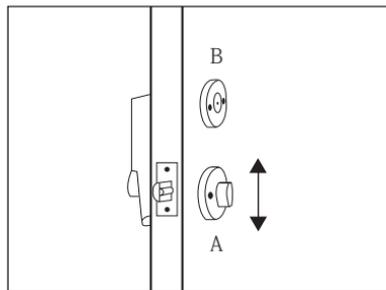
- 7) If the latch does not fully retract, loosen the two thru-bolts of the inside thumbturn assembly. Move the inside thumbturn assembly upward or downward to properly center the inside thumbturn assembly with the tailpiece, (**figure 9-2**) then tighten the thru-bolts, and repeat Steps 1 to 5.
- 8) If the latch (**figure 9-2**) still does not fully retract after repeating Step 7, loosen the two thru-bolts of the inside thumbturn assembly **A** and combination change assembly **B**, (**figure 9-2**). Move the lock upward or downward to properly align both tailpieces of the inside thumbturn assembly and combination change assembly. Tighten the four thru-bolts and repeat Steps 1 to 5 to ensure proper operation.

#### Verify the Combination Change Assembly

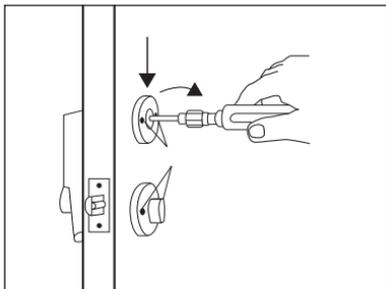
- 1) Insert the tip of a Phillips-head screwdriver into the combination change assembly **B**, **figure 9-3**.
- 2) Turn the central piece to the right (clockwise) until it stops, **DO NOT FORCE**, (approximately 30° degrees).
- 3) Remove the screwdriver; the central piece should automatically return to its initial position.
- 4) If the central piece jams and does not return to its initial position, loosen the two thru-bolts and push the combination change assembly **B** upward, tighten the two thru-bolts, and repeat Steps 1 to 3.



9-1.



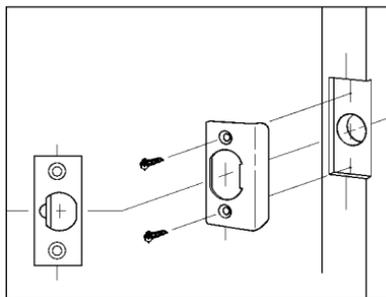
9-2.



9-3.

## 10 Installing the Strike

- 1) Mark the vertical and horizontal center lines of the strike on the door frame by using the center line of the bolt. Make sure the vertical and horizontal center lines are well aligned with the latch bolt center lines.
- 2) Where the center lines meet, drill a  $\frac{1}{8}$ " (2.5 mm) diameter by  $\frac{5}{8}$ " (16 mm) deep hole to guarantee that the latch will be completely extended in the door jamb, **figure 10-1**.
- 3) Mortise (chisel out) the marked area to  $\frac{1}{16}$ " (1.5 mm) deep so that the strike will be flush with the door frame.
- 4) Secure the strike, (PG.7, F) with the two screws provided, (PG.7, H).
- 5) Close the door to ensure proper alignment of the latch with the strike plate hole.



10-1.

## 11 Setting a New Combination

**IMPORTANT: The following steps must be performed while the door is open.**

The factory-set code is 2 and 4 pressed simultaneously, followed by 3. This code should be changed as soon as the lock is installed.

- 1) Turn the outside thumbturn to the left (counterclockwise) to the stop position and return it to the right (clockwise) slowly to the horizontal position. This will clear any random buttons previously depressed.
- 2) Enter the existing code.
- 3) Insert a Phillips-head screwdriver into the center of the combination change sleeve.

Gently turn to the right (clockwise) approximately  $\frac{1}{8}$ " (3 mm), **figure 11-1**. A slight click should be felt. **Do not force.**

**IMPORTANT:** When removing the screwdriver, the central piece must return to its initial position, if not, set it back to its original position using the screwdriver; see **Section 8**. Verify the Combination Change Assembly.

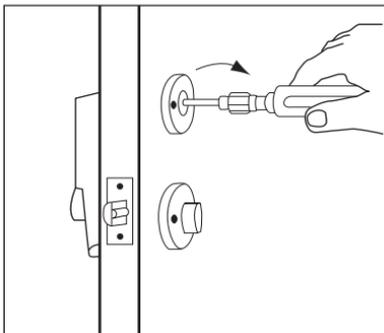
- 4) Turn the outside thumbturn to the left (counterclockwise) to the stop position, once only, to clear the existing code from the mechanism, then release it.
- 5) Select a new code and write it down (some or all of the buttons may be used for your new code, pressed individually or simultaneously).

**NOTE:** Each button may be used only once.

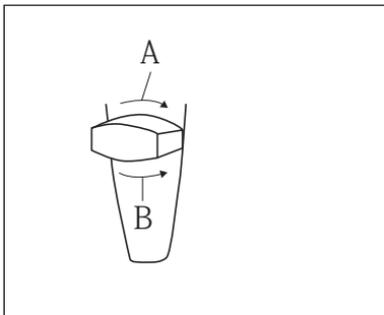
- 6) With the **door open**, enter your new code. Depress each button fully and release.
- 7) Turn the outside thumbturn to the right (**A**) (clockwise) to the stop position. The latch should retract. Now release the thumbturn. Try to turn the thumbturn to the right (clockwise). The thumbturn will not turn to the right (clockwise) unless the correct combination is entered. If it does turn and retracts the latch, see **Step 9**.

**NOTE:** Excessive force will result in slipping the thumbturn 180° degrees. The slipping mechanism, or force-proof clutch, protects the lock's internal mechanism from forced entry.

- 8) If a wrong combination is entered after the desired combination has been programmed into the lock, turn the outside thumbturn to the left (**B**) (counterclockwise) to the stop position and release, **figure 11-2**. This will clear any previously depressed buttons. Enter the correct new combination. Turn the thumbturn to the right (**A**) (clockwise) to the stop position and release, **figure 11-2**. The thumbturn should rotate. The latch will be retracted flush with the face plate. The correct combination must be entered each time you want to unlock the door.



11-1.



11-2.

- 
- 9) If, without entering the combination, you can retract the latch by turning the outside thumbturn to the right, it means that a step was done out of order and therefore no combination was entered. In this case, you must repeat Steps 1 to 7 but omit Step 2, as the lock does not have a combination.
  - 10) Test the lock 2-3 times using the new combinations to ensure trouble-free operation.

## Making the Latch Face Plate Cutout

This procedure is applicable to wood doors.

- 1) Insert the latch into the 1" (25 mm) hole until the face plate butts up against the door edge. Draw a line around the face plate, **figure 5-1, A**. Remove the latch from the door.
- 2) For doors without a beveled edge, use a sharp 1" (25 mm) wood chisel to remove approximately  $\frac{1}{8}$ " (3 mm) of material or enough so the face plate is perfectly flush with the edge of the door, **figure 5-1, B**.
- 3) For doors with a beveled edge, follow Step 2 except the face plate will not be flush with the edge of the door, but rather square to the face of the door. In order to accomplish this, you must remove more wood from the higher edge of the door.

- ? Lock fails to open when combination is entered and outside thumbturn is rotated clockwise.
- Buttons were not fully depressed when the combination was entered.
- ☞ Lock not cleared of previous attempts to enter access codes. Turn outside thumbturn to the left to clear the wrong entry. Enter the combination making sure you feel each button click to know it was depressed fully.
  
- ? Turning outside thumbturn clockwise always retracts latch without depressing any buttons.
- Lock is in zero combination.
- ☞ Follow the procedure for changing a combination (**Section 10**, Steps 3-7, on pages 22 & 23).
  
- ? Inside thumbturn only retracts latch partially or not at all, in either clockwise or counterclockwise direction.
- Latch has not been properly installed.
- ☞ Take the lock off of the door. Re-install the latch. Review and follow instructions in **Section 7**, Steps 1-5 on pages 16 & 17.
  
- ? After inserting the new combination, the lock works one time only, then fails to open.
- Buttons of intended combination are not fully depressed when changing combination.
- ☞ This is a lost combination situation. Please call our Technical Service Dept. For further information at (800) 849-TECH. Outside U.S.A. and Canada, please call your KABA ILCO dealer.
  
- ? Adjustable latch will not retract fully in the 2¾" back set position.
- 1" diameter hole is not bored to depth of at least 4".
- ☞ Re-drill hole to 4" depth minimum.

## ONE YEAR WARRANTY

This KABA ILCO product is warranted to be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of purchase. However, this warranty does not cover problems arising out of improper installation or use. Our only liability, whether in tort or in contract, under this warranty is to repair or replace products which are returned to the KABA ILCO factory, shipping charges prepaid to the address shown within the one (1) year warranty period.

Our warranty shall only apply if the item returned is found by analysis by KABA ILCO factory personnel to be defective.

This warranty is in lieu of and not in addition to any other warranty or condition, express or implied, including without limitation merchantability, fitness for purpose or absence of latent defects.



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