

U. S. Patent Nos. 2,675,600 & 3,287,530

# SMALL CONE CHART

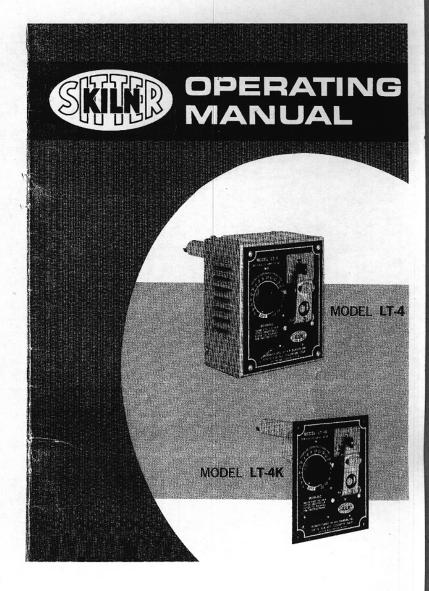
CONE NUMBER	TEMP.	
022	1165°F.*	
021	1189	
020	1231	
019	1333	
018	1386	
017	1443	
016	1517	
015	1549	
014	1596	
013	1615	
012	1650	
011	1680	
010	1686	
09	1751	
03	1801	
07	1846	
06	1873	

CONE NUMBER	TEMP.
05	1944°F.°
04	2008
03	2068
02	2098
01	2152
1	2154
2	2154
3	2185
4	2208
5	2230
6	2291
7	2307
8	2372
. 9	2403
10	2426
11	2437
12	2471

<sup>\*</sup> Temperatures approximate.

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#### CAUTION

The KILN SITTER control is a valuable aid when firing your kiln and is engineered to give you years of trouble-free operation when it is properly adjusted and maintained as outlined in the KILN SITTER Operating Manual.

It is, however, recommended that the KILN SITTER NOT be left unattended beyond the estimated firing time. An uncontrollable accident, such as greenware falling against the end of the KILN SITTER tube, combined with a malfunction of the Limit Timer motor, may cause an overfiring which could damage your kiln. Should this occur, the operator should be in attendance to shut off the kiln manually.

Never use lubricants of any kind on the KILN-SITTER!



You are now the owner of a ceramic kiln equipped with the MODEL LT-4 or MODEL LT-4K KILN SITTER shut-off control. Years of trouble-free firing are yours to enjoy if you will take the time NOW to carefully read the operating instructions that have come with your kiln.

FIRST READ YOUR KILN MANUFACTURER'S MANUAL OF OPERATING INSTRUCTIONS.

THEN READ THIS - YOUR KILN-SITTER OPERATING MANUAL.

The KILN-SITTER is a mechanical control which shuts off your kiln when a pyrometric cone reaches maturity and bends to a predetermined angle. The Models LT-4 and LT-4K also have an electrically driven mechanism, set by the operator prior to firing, which will trip the lock and shut off the kiln if the normal cone operation does not perform properly. This back-up device is used only as a safety feature and should not be used to override the function of the cone.

Over a period of 20 years, a quarter of a million ceramists the world over have had more time to enjoy their hobby because the KILN-SITTER was "watching" their kiln for them while they did other things.

Kiln manufacturers install the KILN-SITTER in different locations on their kiln, which places the shut-off control in firing environments which differ slightly. Also, minute differences in the adjustment of the KILN-SITTER mechanism itself can cause slight variances in the shut-off. It is, therefore, most important that you test fire this particular kiln with the KILN-SITTER before you do anything else.

#### **ADJUSTMENTS**

Even though your KILN-SITTER was adjusted at the factory, it could have been arred out of adjustment during shipment or delivery. Let's first be sure the KILN-SITTER is in proper adjustment before firing.

lere are some simple adjustment checks for you to make before firing your iln. We urge you to make them carefully.

The KILN-SITTER may get out of adjustment over a period of normal firing operations due to heat, corrosion and mechanical wear. The same adjustment procedures, outlined below, should be performed after every 20 firings, or so, to assure the proper continued operation of the KILN-SITTER.

#### . TURN ALL SWITCHES OFF

#### . INSTALL FIRING GAUGE



Normally the firing gauge is in position when your kiln is shipped from the factory (held by a rubber band at the end of the KILN-SITTER tube). If it has been removed, it should now be replaced over the sensing rod and cone supports, as shown in Figure 1.

# CHECK CLAW AND WEIGHT TRIGGER ADJUSTMENT

The claw and sensing rod are kept from sliding in and out by two pins on the left side of the claw which bracket the guide plate. If pins are not in this position, as shown in Figure 2, see page 12 for installation procedure.

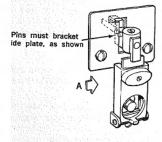


Figure 2

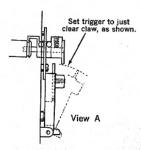
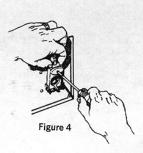


Figure 3

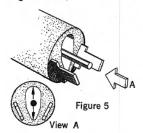
a. With the firing gauge in position, raise the weight up against the guide plate and then slowly swing it forward. The trigger should just clear the tip of the claw, as shown in Figure 3. The set screw in front of weight may be loosened to raise or lower trigger, as shown in Figure 4. Set screw must be firmly retightened or the force of repeated falling of the weight may cause the trigger to creep out of adjustment.



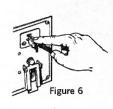
b. If your kiln should be standing on an uneven or sloping floor, the weight may not fall when released. If this should occur, your kiln must be leveled.

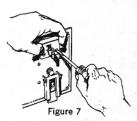
### 4. CHECK TRAVEL OF SENSING ROD

The firing gauge should now be removed but KEPT FOR FUTURE PERIODIC ADJUSTMENTS. The sensing rod is now free to travel vertically within the tube cavity. It should travel freely in the center of the cavity without touching the sides at any point, as shown in Figure 5 and 6.



If necessary, the sensing rod may be centered by loosening the two guide plate screws in front of the KILN-SITTER and moving the guide plate to right or left as required, as shown in Figure 7. Be sure guide plate screws are firmly retightened.





When these adjustments have been made, you are ready to test fire.

#### **TEST FIRING**

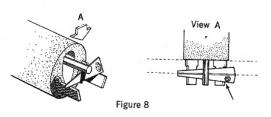
Firing tests are made with the kiln empty. Two junior size No. 020 cones, which mature at a relatively low temperature, are provided with the KILN-SITTER for test firing. This allows you to complete the test firing in the shortest possible time. Additional cones are available from your dealer.

- 1. FIRING GAUGE HAS BEEN REMOVED
- 2. APPLY KILN WASH

(A small nail polish bottle with brush is ideal for this purpose.) Mix Hi-Fire kiln wash with water to a creamy solution. Apply a thin coat to the top of the cone supports and the bottom of the sensing rod where they will come in contact with the cone. Do not apply kiln wash to the cone or to the end of the porcelain tube. Allow wash to dry thoroughly.

- 3. RAISE WEIGHT UP AGAINST GUIDE PLATE.
- 4. PRESS CLAW DOWN LIGHTLY UNTIL IT ENGAGES TRIGGER.
- 5. INSERT CONE.

While holding claw down over trigger, carefully place one of the test cones flat on the cone supports with the inside edge of the number circle even with the outside edge of the cone support. See Figure 8. Cone should be against the metal step of the cone support with the center of the cone parallel with the end of the tube.



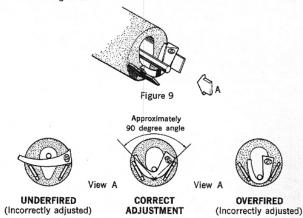
CAUTION: Since the cone is the triggering element that shuts off your kiln, its correct positioning is important for proper firing. IF CONE IS DISLODGED BY ACCIDENT OR ALLOWED TO COME IN CONTACT WITH THE PORCELAIN TUBE, AN OVER-FIRING MAY RESULT WHICH COULD CAUSE SERIOUS DAMAGE TO YOUR KILN.

The cone now holds the claw engaged so that the weight is supported and your hands are free. You are now ready to close the kiln and begin the test fire.

- 6. TURN ALL KILN SWITCHES OFF
- 7. SINCE THE LIMIT TIMER IS NOT USED DURING THE TEST FIRING, TURN TIMER KNOB CLOCKWISE TO NUMBER 4 OR 5 ON THE SCALE.
- 8. INSERT FINGER INTO HOLE IN THE WEIGHT AND PUSH FIRM-LY IN ON PLUNGER UNTIL IT LOCKS
- FIRE THE KILN BY USING THE REGULAR KILN SWITCHES, AS INSTRUCTED BY THE KILN MANUFACTURER. (For purposes of test firing, when kiln is empty, the highest temperature setting may be used.)

In approximately one hour the KILN-SITTER weight will drop, shutting off the kiln.

When the kiln is cool enough to handle you may open it and inspect the firing cone. If all adjustments have been made correctly, the cone on the KILN-SITTER will be bent to an approximate 90 degree angle shape similar to the illustration in Figure 9.



The best way to verify that your load is reaching a certain firing treatment is by using witness cones. These are valuable and inexpensive instruments which reliably measure actual firing performance. Witness cones are optional but we recommend their use during test firing and also periodically during normal operations, as a check for consistent firing performance. For information on witness cones, refer to page 8.

You are now ready to begin normal firing operations.

# NORMAL OPERATION

It is the responsibility of the KILN-SITTER user to become familiar with the proper operation and adjustment of the KILN-SITTER. If the simple steps and precautions, outlined in this manual, are followed with care, it will serve you as a valuable and reliable instrument for greater success and enjoyment in your ceramic firing.

When you have assured that the KILN-SITTER is in proper adjustment, by test firing, as described in that section, you are ready for normal firing operation.

#### 1. CHECK SENSING ROD

It is a good habit to check the sensing rod for free and centered travel before each and every firing. In spite of precautions, foreign material could accidentally get into the tube cavity. Also, excessive heat could cause the rod to bend out of shape. If the sensing rod moves sluggishly or does not fall freely to the bottom of the tube, correction must be made before firing. Refer to Adjustment Section. Item 4.

#### 2. TURN ALL KILN SWITCHES OFF

The life of the KILN-SITTER switch will be increased if kiln switches are off before engaging KILN-SITTER.

#### 3. APPLY KILN WASH

Mix Hi-Fire kiln wash to a creamy solution. Apply a thin coat to the top of the cone supports and the bottom of the sensing rod where they will come in contact with the cone. Allow wash to dry thoroughly.

#### 4. STACK WARE IN KILN

When arranging a load of ware in your kiln, care should be taken to keep the KILN-SITTER tube, cone supports, and firing cones visible from above at all times. If tube is covered from view, the firing cone could accidentally be dislodged from its proper position without being noticed and cause a malfunction of the KILN-SITTER shut-off. Shelves and ware should be positioned at least an inch from KILN-SITTER tube so that the normal shut-off function will not be obstructed.

#### 5. RAISE WEIGHT UP AGAINST GUIDE PLATE

### 6. PRESS CLAW DOWN LIGHTLY UNTIL IT ENGAGES TRIGGER.

#### 7. INSERT CONE (Junior size cones are used on KILN-SITTER)

While holding claw down over trigger, carefully place the cone, selected for your firing, flat on the metal cone supports with the inside edge of the number circle even with the outside edge of the cone supports, see Figure 8, page 4. Cone should be against the metal step with the center of the cone parallel with the end of the tube. Consistent placement of the cone in this manner will lead to consistent firing control. The cone now holds the claw engaged so that the weight is supported and your hands are free.

# 8. CHECK POSITION OF CONE

As a last step before closing kiln, always check to see that the cone is in its proper position and free of obstructions. AN IMPROPERLY PLACED CONE COULD CAUSE AN OVERFIRING AND DAMAGE YOUR KILN AND WARE LOAD.

9. CLOSE KILN All kiln switches are off at this point.

# 10. SET LIMIT TIMER KNOB (1/2 to 1 hr. beyond estimated firing time)

The timing knob will not allow the plunger assembly to engage when in the OFF position. Always set the timing motor prior to switch engagement (pushing in on plunger).

#### How to use the Limit Timer

The limit timer is a safety shut-off device to protect your kiln from over-firing in case the KILN-SITTER fails, through some malfunction, to shut off the kiln when the pyometric cone has matured. The numbers on the limit timer control knob indicate 20 hours of firing time and if your firing requires a longer period the knob may be reset during firing for this additional time. Since the function of the limit timer is to override the actual firing time it should always be set for a longer period than the estimated firing time. After you have become familiar with the firing time of your particular kiln you can set the limit time as low as  $\frac{1}{2}$  hour longer than the estimated firing time. Until you have reached that degree of familiarity it is safer to set the limit timer at least 1 hour longer than the estimated firing time.

The limit timer may also be used as a timing device to aid you while you are learning to estimate firing times. For example, if the timer knob is set at 10 before firing and the indicator is on 6 when firing is completed, you know that the elapsed firing time was 4 hours.

Caution: The timing knob should never be set beyond 20 hours. If the timing motor should be inoperative, such action could jam the switch assembly, possibly causing an overfiring.

# 11. INSERT FINGER INTO HOLE IN THE WEIGHT AND PUSH FIRM-LY IN ON THE PLUNGER UNTIL IT LOCKS.

#### 12. WEIGHT CLEARANCE

The area outside the kiln should be clear of obstructions so the free fall of the weight is not impeded.

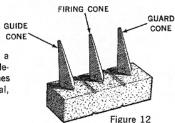
13. FIRE THE KILN by using the regular kiln switches, as instructed by the kiln manufacturer.

# PO NOT LEAVE THE KILN UNATTENDED BEYOND ESTIMATED FIRING TIME. An uncontrollable accident, such as greenware falling against the end of the KILN-SITTER tube combined with a malfunction of the Limit Timing motor, may cause an overfiring which could damage your kiln. Should this occur, the operator should be in attendance to shut off the kiln manually.

#### WITNESS CONES

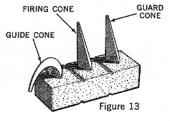
A pyrometric cone is a slender pyramid composed of materials compounded in selected combinations to make a cone that will react to time and temperature in the same way as the ware you place in your kiln. Because different clays and glazes require different heat treatment to mature properly, pyrometric cones are made in a series of cone numbers so that one is available to properly control the firing of the clay or glaze you are using.

Even though junior size cones are always used on the KILN-SITTER, LARGE SIZE cones are recommended as witness cones for test firing your kiln and KILN-SITTER, and periodically during normal firing, to help you determine whether firing shut-off is just right . . . too soon (too low a temperature) . . . or too late (too high a temperature). During the test firing you will also learn your kiln's "personality" or its heat distribution.

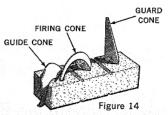


For this test firing you will need a plaque, which is a porous clay base designed to hold three large size cones at an angle of 8 degrees from vertical, see Figure 12.

A cone, one number cooler than the firing cone, is placed on one side. This is called the GUIDE CONE. It matures at a temperature approximately 30 degrees lower than the firing cone. When it bends it serves warning that shutoff time is near, see Figure 13.



The cone number we wish to fire to is placed in the middle. It is called the FIRING CONE. It is the same cone number as the cone on your KILN-SITTER. When it bends over with the tip close to, but not quite touching the base, you know that the desired heat treatment has been reached, see Figure 14.



On the other side is a cone, one number hotter than the firing cone. It is called the GUARD CONE. If it bends at all you know that the kiln has fired beyond the preselected point.

The plaque of three cones should be placed on a shelf close to the level of the KILN-SITTER tube. However, because a shelf supported by stilts is not completely stable, the height of the shelf, should be one inch above or one inch below the tube. This will prevent a possible jamming of the normal KILN-SITTER shut-off function should the shelf expand or tilt in the direction of the tube.

After test firing, during normal operations, you may wish to place a plaque on EACH shelf level, since temperatures vary at different levels within a kiln. When setting your kiln shelves, follow the kiln manufacturer's instructions. The spacing between shelves will depend upon the objects you wish to fire. This spacing, as well as the size and weight of your ware, has an effect on heat distribution.

After firing is completed you will see some differences in the appearance of the test plaques. If for example your firing was made with two or more shelves, the lower shelf will usually show less bending of the cones than the plaque located on a shelf near the top of the kiln. This range of heat treatment normally will be within the range recommended for your materials.

The shelf locations, and amount of material placed on each shelf and the switching sequence will have some effect upon the heat distribution in your kiln. But as long as each plaque of cones show cone values within the range recommended for your material you can be sure it is receiving proper heat treatment.

Now fire the kiln in the manner recommended by the kiln manufacturer. Use the proper switch sequence and note venting procedures for necessary air circulation.

If witness cones, after the first test fire, appear similar to those illustrated in Figure 14, you will know that the KILN-SITTER is in proper adjustment, but, make a second test fire exactly as you did before. This will serve as a double check and indicate consistency of firing performance.

If the witness firing cone is UNBENT, then test fire a second time using a hotter cone on the KILN-SITTER (one number hotter).

If the witness firing cone is FLAT, then test fire a second time using a cooler cone on the KILN-SITTER (one number cooler).

If a second test fire, as recommended above, does not cause proper maturing of the witness cones, as illustrated in Figure 14, then it is recommended that you recheck all adjustments, as described in that section and repeat the two test fires.

# MAINTENANCE OF YOUR KILN-SITTER

Your KILN-SITTER is manufactured from the finest materials available — selected for strength, durability and resistance to heat and corrosion. A ceramic kiln, however, creates intense heat, and load ware often emits corrosive gases, all of which can, in time, alter the normal shut-off function. Below are maintenance procedures and operating recommendations which will keep your KILN-SITTER doing its job. Careful attention to these instructions will reward you with trouble-free firing.

#### PERIODIC ADJUSTMENTS

Due to heat, corrosion and mechanical wear, the KILN-SITTER may get out of adjustment over a period of normal firing operations. Also, the repeated fall of the weight could force the trigger to creep. To assure consistent firing it is recommended that the steps, outlined on Page 2 under "Adjustments", be carefully repeated every 20 firings or so.

#### VENTING OF KILN

During the firing of clay, glazes and especially china paints, various gases are generated which can corrode the chrome-plated swivel and cause malfunction of the KILN-SITTER. We therefore recommend that the kiln be slightly vented during the entire firing period by leaving the top peep hole open to allow these gases to escape. All other peep holes should be closed.

### CARE OF CONE SUPPORTS

Excess kiln wash must not be allowed to accumulate on the cone supports. Kiln wash can be easily removed by hand. If any non-removable materials accumulate, cone supports must be replaced.

# CARE OF SENSING ROD AND PIVOT POINT

Continued operation at high fire temperatures will eventually cause the end of the rod to deteriorate or bend. This will, in turn, affect the adjustment between the trigger and the claw. If this occurs, the rod must be replaced. See page 12.

Sluggish movement of the sensing rod can be caused by accumulation of residue or by corrosion at the point where sensing rod passes through the pivot washer. Should this occur, release the claw set screw and from the inside of the kiln move the sensing rod in and out while rotating it between the fingers. Realign the end of the sensing rod with the end of the cone supports as shown in Figure 18, page 12, and retighten set screw in claw. Free and easy movement of the sensing rod should be checked before each firing as shown in Figure 6, page 3.

# **OPERATIONAL TEMPERATURE**

The KILN-SITTER is engineered to withstand kiln temperatures up to and including cone No. 8. Temperatures higher than this limit will reduce the normal lifetime of the cone supports and sensing rod.

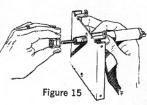
# REPLACEMENT OF TUBE - MODEL LT-4

Should it become necessary to replace the tube in the Model LT-4 KILN-SITTER, the following instructions should be followed:

# CAUTION: BE SURE POWER IS OFF BEFORE PROCEEDING!

Note: For easy identification of Model LT-4 parts, refer to the illustration on page 14.

- 1. Remove the two screws holding the guide plate. If the inside end of the sensing rod has not been distorted from use, it can be withdrawn, together with the guide plate, claw and counter weight still attached (no counter weight on 2½" and 3" tubes). If the sensing rod does not withdraw easily, then unscrew the claw set screw and remove the claw from the sensing rod, together with the guide plate and counter weight (if present). The sensing rod may then be removed by withdrawing it from the inside of the kiln.
- Remove box from baffle plate by unscrewing the two ¼" machine screws on either side of the box (4 screws).
- Remove baffle plate from kiln by unscrewing the four 3/8" metal screws. Baffle plate, with the tube assembly attached, is now free to be withdrawn from the opening in the kiln wall.
- Disassemble the old tube from the baffle plate by removing the large nut and washer.
- 5. Remove nut and washer from the new tube assembly. Insert nipple and tube through hole in baffle plate, as shown in Figure 15. Replace washer and nut but before tightening be sure that the spline, protruding from the baffle plate, engages the notch at the top of the tube metal jacket. When the nut is tightened, the end of the nipple threads should be flush with the outer surface of the nut. If necessary, the nipple can be threaded in or out of the jacket to achieve this adjustment. When these things are done tighten nut firmly.



- Place the spring wire retainer over the tube and onto the metal jacket, then the asbestos washer. After reinstalling baffle plate onto kiln wall, push asbestos washer and spring wire retainer forward against the kiln wall.
- 7. Reinstall box assembly onto baffle plate.
- Install new sensing rod, together with claw, guide plate and counter weight (if required) as described below in REPLACEMENT OF SENSING ROD.
- 9. Adjust and test fire the newly installed tube as described in the feast fact.

of the manual

front part

# REPLACEMENT OF SENSING ROD - MODEL LT-4

Should it become necessary to replace the sensing rod in the LT-4 KILN-SITTER, the following instructions should be followed:

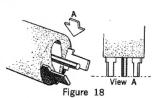
Note: For easy identification of Model LT-4 parts, refer to the illustration on

- 1. Remove old sensing rod by following the instructions in paragraph 1, page 11.
- 2. Remove guide plate from claw by raising claw to top of slot where pins can pass through. Remove claw from old sensing rod (if still attached) by loosening set screw.
- 3. Slide claw onto end of new sensing rod and tighten set screw. Insert sensing rod and claw into slot of guide plate from the front. Raise claw to the top of slot where pins can pass through. With a pin in front and one behind guide plate, lower claw half way down in the slot. Holding this assembly as shown in Figure 16, slide \*counter weight (if required) onto free end of sensing rod and push against claw until it locks in place, as shown in Figure 17. Still holding the assembly as before, pass the sensing rod through the plate opening and into hole in the pivot washer. Position guide plate on front plate and replace screws. Claw is now free to move up and down in the slot but is restrained from moving in and out by the pins.
- 4. As shown in Figure 18, the rear end of the sensing rod should be even with the ends of the cone supports. Set screw in claw may be loosened if adjustment is necessary. Be sure set screw is firmly retightened.





Figure 17



5. Adjust and test fire the newly installed sensing rod as described in the front part of the manual.

\*Counter weights are standard on all tube assemblies except the 21/2" and 3" tubes. These weights provide a counterbalance which controls the weight of the sensing rod as it bears on the cone during firing. In this way, firing performance is equalized between rods of different lengths. The counter weight must be locked into claw at all times.

# REPLACEMENT OF TUBE - MODEL LT-4K

Should it become necessary to replace the tube in the Model LT-4K KILN-SITTER, the following instructions should be followed:

## CAUTION: BE SURE POWER IS OFF BEFORE PROCEEDING!

Note: For easy identification of Model LT-4K parts, refer to the illustration on page 14.

- 1. Remove the two screws holding the guide plate. If the inside end of the sensing rod has not been distorted by use, it can be withdrawn with the guide plate and claw still attached. If the sensing rod does not withdraw easily, then unscrew the claw set screw and remove the claw and guide plate from the sensing rod. The sensing rod may then be removed by withdrawing it from the inside of the kiln.
- 2. Remove the two flat-headed screws which were hidden behind the guide plate. This frees the tube from the front plate.
- 3. Free the front plate from the kiln gutter by removing its four screws top
- 4. The plate can now be pulled forward as far as the wiring will allow. Usually this will provide enough room to remove the old tube and install its replacement. If wiring does not provide sufficient clearance for the tube, it may be necessary to remove the entire wiring gutter from the kiln.
- 5. Attach new replacement tube. Refer to exploded diagram, inside back cover, for proper positioning of tube.
- 6. Replace front plate onto the kiln gutter.
- 7. Install new sensing rod as instructed on page 12, REPLACEMENT OF SENSING ROD . LT-4. The procedure is the same except that none of the K Models use counter weights.
- 8. Adjust and test fire the newly installed tube as described in the front part of the manual.

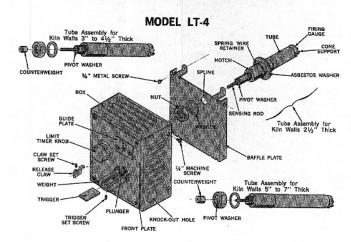
## REPLACEMENT OF SENSING ROD - MODEL LT-4K

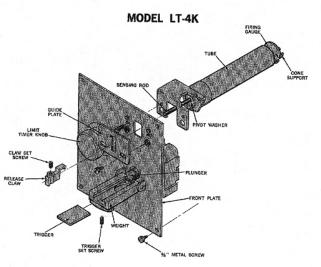
Note: For easy identification of Model LT-4K parts, refer to the illustration on

Follow instructions on page 12, REPLACEMENT OF SENSING ROD - LT-4. The procedure is the same with the exception that none of the K Models use counter weights.

When the new sensing rod has been installed be sure to adjust and test fire it as described in the front part of the manual.

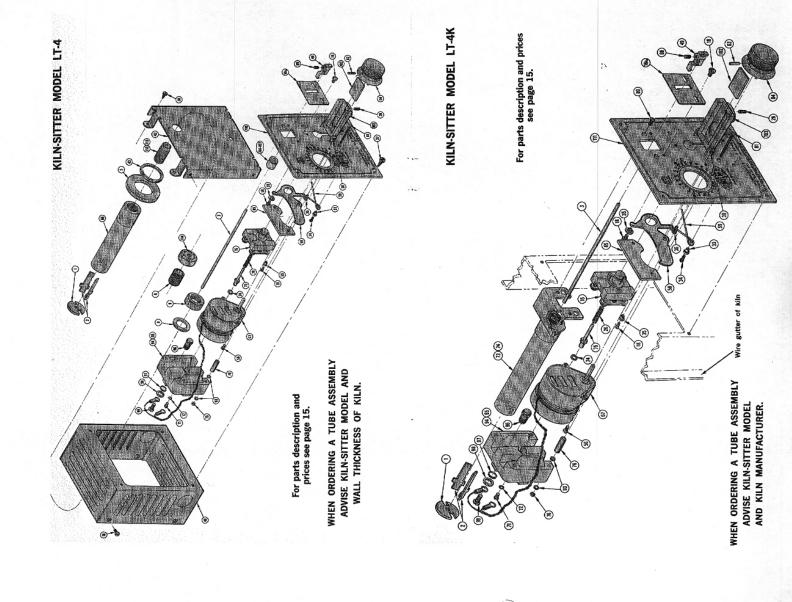
# KILN-SITTER PARTS IDENTIFICATION





# KILN-SITTER PARTS & PRICE LIST Model LT-4 & LT-4K

	Part	Part No. Description	Price	Part	No.
		Gauge, firing	.55	72	Lock Washer, center
	N C	Pr. Cone Supports	.85	73	Tube assembly, K-10
-	o rc	Asharton Confer model and kiln wall thickness)	.95	;	6" overall, end of po
. •	9	Brass Nipole only	04.	74	Tube assembly, K-1
-	00	Washer, tube nut	25	1	overall, end or po
,	6	Nut only, tube	95	0,4	Venter Post
	15		7.25	28	Stand off Bushing s
	16b	Guide Plate only	1.70	200	Screw flat head 6/
. •	18	Screw, 6/32 x 1/4"	.05	88	Screw. switch mount
	\$ 2	Paper Washer, Center post	.05	82	Shim, motor mounti
	9 8	Spring, center post	4.	8	Nylon washer, switch
***	38	Divot Din	.10	8	Switch block only
• •••	200	Retainer lock spring	CN C	32	Switch block with co
	348	Screw 4/40 v 12."	62.	2	& spring
	32	Retainer, locking cam or lock	25.0	200	Rear contact, modifi
,	36	Screw. lock spring 4/40 x 1/2"	201	000	Nit contact
,	37	Screw, 3/8" x #6 metal	10	88	Screw 10/32 v 5/1
,	8		.10	102	Trigger, (1/16" x 3
4	<b>Q</b>	Box, large opening (P-10 & LT-4)	9.50	103	Weight only (1/16"
4.	25	Heat baffle, off center hole (P-10 & LT-4)	2.80	104	Counterweight, (.235
,	25	Retainer, spring ring	.20	105	`
	2 4	Claw with set screw, nylon	2.80	106	Counterweight, (.587
	88	Screw, motor mounting 6/32 x 1/4"	.05	107	Counterweight, (1.06
,	9 6	Spring, Carri	1.40	110	
	62	Set Screw. knob 10/32 × 12."	95	111	WITH #102, #103, #2
_	3	Knob only, 9/16" thick	3.35	111	
_	99	ā		112	Ninole with washer
		8.05 5"	10.25	113	Nipple with washer
		275"	0.85	114	
		o	1.40		
	19	(110V or 220V 20 hr. LT3K)	9.50		
-	69	3/16"	.10		
	7	screw, center post 6/32 x 5/16"	.10		



16.