



# FIRED UP KILNS

*and pottery supplies*



## Setting up your new Craft Kiln

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### Preface:

During transport certain parts of your kiln may become loose. This mainly concerns the adjusting bolts together with the nuts on the hinge, the lock, and the lid pin. With large kilns, this can sometimes result in the metal mantle shifting slightly and causing misalignment of the protection circuit.

In older kilns it may be that the wool starts to give space, so that the adjustment of both the lock and the lid pin no longer correspond properly.

In this document, these minor maintenance operations are explained along with photos to help.

### Adjusting the Hinge:

Transporting the kiln can cause the locking feet on the back of the oven to come loose. If required, resecure these with two open end wrenches (10mm). The feet should be adjusted so that the kiln lid when opened maintains a 90° angle to the kiln body.



### Adjusting the Kiln Latch:

The kiln latch keeps the lid closed at high temperatures. Resistance should be felt when you latch the kiln lid closed. With the latch closed, the kiln lid should no longer be able to be move. If this is not the case, then you need to adjust the kiln lid latch.

Loosen the locknut with an open-end spanner (10mm), then turn the actual latch clockwise to tighten. Once the lid can no longer move and resistance is felt when closing the lock, the lock nut can be re-tightened.



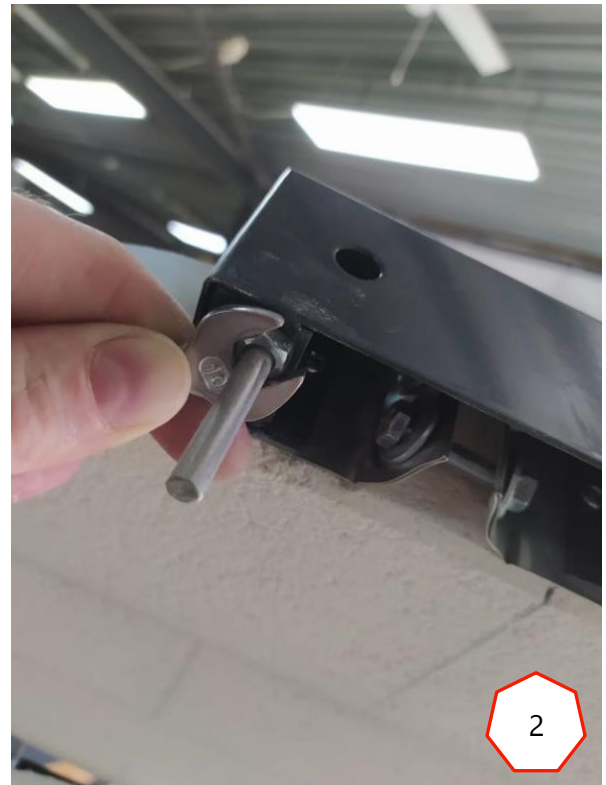
### Adjusting the Lid Pin:

Before adjusting the lid pin, check the kiln latch in the previous section.

If the lid pin does not fit correctly, it is likely that the kiln will fail during a firing as this is a safety measure to allow power to the elements. The controller will indicate the error “kiln does heat up”.

Close the lid of the kiln and latch it secure. Then check whether the metal tab of the switch rests on the black housing, see photo 1 below. If there is a space between them then you need to adjust the lid pin.

To adjust the Lid Pin, loosen the locknut and extend the lid pin by turning it counter clockwise, see picture 2. **Make only small adjustments and test regularly.** The metal tab can bend and eventually break due to fatigue. Once the lid pin actuates the switch correctly, secure it again with the locknut.



### Voltage & Current measurement:

The power supply varies based on each location. It is therefore recommended to measure the voltage with the kiln switched on. This information can be useful should any problems arise now or in the future. The kilns are calibrated to run within the 230V AC supply (unless ordered differently). Should the voltage drop while the kiln is functioning, this may cause shorter element life.



For example:

A single phase kiln is supplied with  $13.5\Omega$ . This resistance gives a slight over-ability to account for wear.

To calculate the expected amperage using Ohm's law:  $I = U/R$   $235/13,5 = 17,5A$

The expected power of this oven is therefore slightly higher:  $P = U \times I$ :  $235 \times 17,5 = 4100W$ .

This will drop quickly due to the initial wear and voltage drop.

However, there is no 235V AC continuously from the socket, but only 203V AC. This has the following consequence for the power:

$I = U / R$ :  $203/13,5 = 15,1A$

$P = U \times I$ :  $203 \times 15,1 = 3050W$ .

This power shortage can result in premature failure at high temperatures. That is why it's important to note this information.

### The First firing of the kiln:

To prevent excessive wear of your elements, your new kiln needs to be fired initially with no ceramic ware inside.

This forms a protective oxide layer to develop on the elements and prevents corrosive gases (released from your clay and glaze) damaging the element wire.

We recommend the following settings for your first (empty kiln) firing:

- 75°C/h to 600°C
- 100°C/h or Skip to 1000°C
- 60 minutes of soaking

We recommend your second firing can be a bisque. The final temperature should be between 980°C - 1050°C.

It is now fine to commence glaze firing.

**Your kiln is now ready for use**

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