

## Envelope Kilns

**Keith envelope kilns are well recognized for their performance, efficiency, and reliability by leading potteries around the world. With modular design, high-efficiency, and long service life, they provide superior value and dependability.**

### What is an Envelope Kiln?

The key design feature of envelope kilns is that they roll on wheels over one of several supplied stationary ware platforms.

You can fire decoration in 1400°F, as well as bisque or glost fire ceramics to 2300°F, in Keith's fiber-lined, gas fired envelope kiln. Frequently requested setting volumes range from 60 ft<sup>3</sup> to 1000 ft<sup>3</sup>. Most importantly, this kiln is priced to suit very low budgets without sacrificing performance or safety.

Keith's envelope kilns have the advantage of rolling over one ware setting or another, without ever having to move the stationary ware setting. This envelope kiln is especially well-suited for firing tall or fragile products like ceramic wafers. And, the envelope kiln uses a 1/3 less floor space than a comparably-sized [shuttle kiln](#).

This kiln is extremely energy efficient because it is fiber-lined. Programmable controls automatically fire the kiln through the complete firing cycle. Keith's user-friendly control system can be fully depended upon to fire the kiln with ease and excellent repeatability cycle after cycle.

The difference between an envelope kiln and a [shuttle kiln](#) is moving the kiln or furnace over a stationary ware platform or moving a loaded ware platform (called shuttle or bogie) into a stationary kiln or furnace. The stationary platform of the envelope kiln can be densely set with ware without fear of the load tipping over when the kiln is moved. One platform can be loaded/unloaded while the other is being fired.

Envelope furnaces/kilns require about 1/3 less floor space than comparably sized [shuttle kilns](#). Both type of construction can be built to achieve the similar process parameters. Choosing one construction type over another is dependent on different factors. Loading delicate parts onto stationary ware platform(s) and moving the furnace over the ware platform for the heat processing cycle can be mandatory to achieve high yields. This type of construction is favored for ceramic application. If the part permits to be moved (on a shuttle or bogie), the shuttle design may have an economic advantage due to reduced duct work and more options with floor layout. The biggest advantage of this furnace design is the temperature uniformity which is achieved by having heated surfaces on five sides.

### General Capabilities

- Designs from 36 to 800 ft<sup>3</sup> of working volume
- Electric heating for kilns from 36 to 300 ft<sup>3</sup>
- [Gas heating](#) for kilns from 48 to 800 ft<sup>3</sup>
- Standard gas kiln setting widths of 4, 5 and 6 feet
- Single or multiple zones of control
- Manual or fully automatic firing control
- UL approved control panels
- FM, IRI and NFPA 86 compliant combustion safety equipment

**General Applications:**

- Ceramic membranes in solid oxide fuel cells
- Art ware
- Dinner ware
- Garden pottery
- Lamp ware
- Tile
- Refractories

For use to 2420°F (1326°C) or cone 12 with gas or electric heating, envelope kilns are especially well suited for firing and decorating earthenware, stoneware and porcelain products. Higher temperature models are also available for specialty products.

[Contact Keith Company](#) to order one of the kilns/furnaces mentioned or to learn more about any of our products.



Envelope Kiln with pre-heater  
and thermal oxidizer





Envelope Kiln with Riser Door



Envelope Kiln for ceramic  
membranes

**Category Files:**

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