Pusher Plate Sintering Furnace for Oxide Ceramics

The sintering furnace for oxide ceramics, which is suitable for process temperatures of up to 1680 °C, is electrically heated and has two parallel pusher plate lanes for high throughput rates. The thermal debinding is an integral part of the thermal process plant. This pusher plate sintering furnace is therefore an attractive alternative to the tunnel furnace plants for this application currently on the market. This is especially true if the oxide ceramic products can not be allowed to come into contact with off-gas from burners and have to be fired carefully with the help of a precisely controlled furnace process temperature.

Various accessories and different configurations allow an individual structure with proven serial parts. For example, in case lesser throughputs are required, a one-lane pusher plate configuration is possible.

The two-lane pusher plate sintering furnace is not only interesting from a technological view-point, it also represents a commercially interesting solution for a variety of application fields.

Specifications

<table>
<thead>
<tr>
<th>Technical Features</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective width:</td>
<td>2 x 310 – 2 x 400 mm</td>
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<tr>
<td>Effective height:</td>
<td>380 mm</td>
</tr>
<tr>
<td>Throughput:</td>
<td>3-10 Stacks /h</td>
</tr>
<tr>
<td>Heating:</td>
<td>Electric</td>
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<tr>
<td>Atmosphere:</td>
<td>Air</td>
</tr>
<tr>
<td>Temperatures:</td>
<td>Up to 1680 °C</td>
</tr>
</tbody>
</table>

Applications

The typical application is the firing/sintering of high performance oxide ceramics in an air furnace atmosphere. In the modularly built debinding zone the binder is removed/burnt off in a controlled manner. In the sintering zone the parts undergo thermal treatment with a precise temperature control and an air furnace atmosphere. The cooling is carried out according to the necessary process parameters, first using indirect cooling followed by direct cooling with air inflow.
**Additional equipment modules**

+ Thermal debinding with controlled furnace atmosphere oxygen content
+ Thermal post-combustion for waste-gas treatment
+ Automation

**Foto Gallery**

![typical loading set-up (1 stack of loaded trays)]

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