

## **ALTRA<sup>®</sup> Fiber Modules**

### ***Linings for Firing to 3000 °F***

**ALTRA<sup>®</sup>** fiber modules are designed for application temperatures up to 3000°F. **ALTRA<sup>®</sup>** polycrystalline fibers offer significantly reduced thermal shrinkage compared to refractory ceramic fibers. The reduced shrinkage makes it possible to use **ALTRA<sup>®</sup>** modules at much higher temperatures than ceramic fiber modules. The polycrystalline structure of the **ALTRA<sup>®</sup>** fibers also prevents the generation of cristobalite, a serious health concern with refractory ceramic fibers.



**ALTRA<sup>®</sup>** modules are available in various grades appropriate for oxidizing or reducing atmospheres. They are suitable for lining kilns and furnaces for sintering or firing technical ceramics, electronic ceramics, ferrites, powder metal parts, carbon fibers and other products requiring firing temperatures > 1300°C. Traditionally insulating brick linings are used in these types of kilns and furnaces. **ALTRA<sup>®</sup>** modules allow more rapid heating and cooling than brick linings, thus reducing cycle time and increasing kiln through-put. **ALTRA<sup>®</sup>** modules are not damaged by thermal shock and so can offer longer life and reduced maintenance versus brick linings in applications with rapid thermal cycling conditions.

#### **Grades**

- ALTRA<sup>®</sup> 72 – for application temperatures up to 3000°F in oxidizing and neutral atmospheres
- ALTRA<sup>®</sup> 97 – for reducing atmosphere applications, such as dry hydrogen and vacuum, to 2750°F

#### **Densities**

- 6 to 10 lbs/ft<sup>3</sup>
- Dependent on temperature, atmosphere and firing conditions

#### **Anchors**

- Grades: 304SS, 310SS, 316SS, Inconel
- Types : RA-25, Rath designed SKA50 comb anchors

#### **Options**

- Available mounted on steel panels or expanded metal
- Hardboard or galvanized steel compression plates
- Giant Modules

#### **Engineering Services**

- Heat Flow Analysis
- Layout design for new and retrofit kilns
- Turn key installation and supervision



**ALTRA<sup>®</sup> Modules Installation**  
SKA50 anchors and  
steel compression plates