# Porous Ceramic Application and Product Introduction



## What is Porous Ceramic?

Porous ceramic sintering produces **1~2µm uniform pores** by controlling primary/auxiliary agent in the eutectic reaction, which can not be achieved by conventional technologies.



This method produces  $35 \sim 40\%$  porosity, which represents light weight and high strength characteristics. It can be used in wet, dry or high temperature environments up to  $150^{\circ}$ C.



	Porous ceramic product	Conventional through-hole product
Surface resistance	0	×
Thin workpiece	0	×
Partial Chucking	Ο	×
Suction strength	Ο	<b>▲</b> ×
Wet environments	Ο	0*
High-temp. environments	Ο	×
Cost	Ο	
Convright © KINIK Company All Rights Re	X :	×When workpieces is small

# Conventional vacuum chucks



# Porous ceramic vacuum chucks



The film material would be sucked into the air holes on the suction surface, causing sagging and quality problems. %partial chucking without sagging.
%capable of holding large objects
%produces no dust
%produces no static electricity
%high c/p ratio





This product solves the problems of deformation, sagging, strain, and edge warping that could cause aluminum, stainless steel, and other conventional vacuum chucks.

The use of ultra-fine micron-order pores and our original evacuation system allows reliable handling of thin, delicate workpieces.

#### High-performance, high-precision, uniform suction force! Perfect for films and other thin, delicate workpieces.



### **Space saving!**

#### The suction rolls !



The suction rolls allow chucking and high-speed transport of film materials without leaving suction marks on them. As fastening on any part is possible, this product saves space on plant production lines.



## **Industrial Applications**

FPD, OLED equipment	Glass substrate material handling equipment, Glass substrate lifting transport equipment, Glass substrate scribing apparatus, Slit coaters, Rubbing apparatus, Film laminating apparatus, Glass substrate chamfering machines, Spin washers, Color filter (CF) exposure equipment, Inkjet printers, Laser annealing equipment, Laser cutters, AOI / appearance inspection <i>equipment, Probers</i> / lighting inspection devices.
Semiconductor equipment	Appearance testers, Microscope stages, Dicing machines, Back grinding machines, Chamfering machines.
Electronic components equipment	Sapphire substrate grinders, Greensheet application apparatus.
PCB equipment	Testers, AOI.
Machine tool equipment	Surface grinders, Rotary surface grinders.

## Currently the Main Use of Raw Materials

## **Specification:**

Hole Size:

- 2um Type : Partial chucking for chuck table/air flotation product.
- 2~100um Type-> Non partial chucking for wafer chuck.

#### Standard size :

– 500x500x5mm (2um Type)
 Φ210/Φ310/Φ410/Φ600mm (2~100um Type)

Prouct No.	Porosity(%)	Color
A180	34.052	Khaki
C180	36.098	Gray black
WA2500	41.957	White
NT-AeroFix	56.373	Black
KINIK-C2500	60.132	Black



Can be customized

## **Product Category**







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#### All kinds of chuck tables

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## The Advantages of Porous Ceramic Applied to Flotation

- Zero friction
- Zero wear
- Straight motion 
   Rotation motion can be applied
- Silent and smooth operation
- Higher damping
- Eliminate oil



## Porous Ceramic Air Bearings

### **Conveying air flotation device**

We offer a line of modular air bearing components specifically designed to meet the non-contact glass-handling requirements of the Flat Panel Display and Solar Module manufacturing processes.





**Specification Drawings** 



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Air bar

## **Market Applications**



#### Thin Film Solar Laser Scriber FPD AOI PS/CF



Laser Machine PCB AOI Measuring instruments Machine tool



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