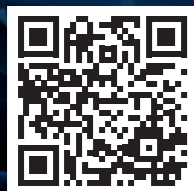




M A C H I N E R Y

High Alumina Porous Products

CA220102/EN/2202/IM

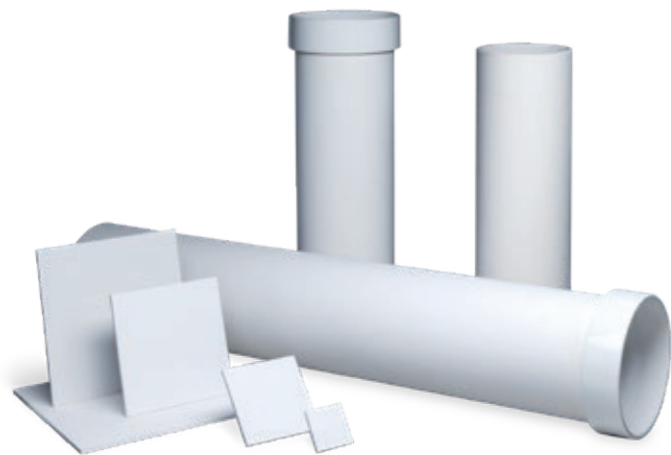


Proven resistance in electrochemical process and electroplating

For most of the ceramic manufacturers, a pore is a flaw that has to be avoided. Very few of them can incorporate pores with predefined properties in ceramic materials. CeramTec designs and manufactures ceramic products with variable porosity and pore sizes for versatile applications. Each material offers a unique set of advantages that pay off in the respective application.

Electroplating

High purity alumina ceramic pots also known as P80 oxamat or diaphragma cells have established themselves as standard material for chrome plating process. Due to its excellent chemical resistance it can withstand even aggressive chromic sulfuric acid. As sulfuric acid is used in electroplating, plant operators need a resistant ceramic that must allow chromium ions to pass through. Metallic impurities can be prevented with the aid of such a permeable medium.



Electrochemical industry

As of high mechanical and chemical resistance, diaphragma plates are also used in electro chemical process where electrical energy is converted to produce the chemicals. These discs allow only certain ions to pass from anode to cathode. The effect is reverse of a battery, where chemicals are converted into electrical energy.

Applications

- Oxidizing of Cr³ into Cr⁶
- Acid etching
- Hazardous materials
- Alkaline etching

Typical Dimensions

With flange Ø 170 mm, 50 mm	135 x 150/170 x 460 mm
	135 x 150/170 x 900 mm
	135 x 150/170 x 1200 mm
Without flange	123.2 x 140.2 x 450 mm
	123.2 x 140.2 x 435 mm
Without and with 2 bores of Ø 15 mm	135 x 150 x 850 mm

Typical Dimensions

Rectangular plates	300 x 520 x 3, 4, 5, 6 mm
--------------------	------------------------------

Further geometries are available on request

Proven resistance in other applications

Agricultural sector

Our P80 ceramic is the most suited material for tensiometer cups, soil moisture level measuring instrument. The tensiometer cups made by CeramTec make it possible for agriculturist to grow the plants using high technology by understanding irrigation demands.



Applications

- Studies on drainage water; ascending and lateral water
- Agricultural and forestry research on plant water and plant physiology
- Soil water balance
- Regulating irrigation systems
- Water extraction system control sensor
- Ecological conservation

Material Properties of P80

Content of Al ₂ O ₃	81 %
Water absorption	20 %
Density	2 g/cm ³
Open porosity	40 %
Minimum pore size	0,4 µm
Maximum application temperature	1300 °C