

Rotary Kiln VS Rotary Dryer

In the cement industry, **rotary kiln** and **rotary dryer** are commonly used, which play an important role in the stages of clinker calcination and raw material preparation. In principle, they all play a role in drying materials through the use of high temperatures, but their purpose is different. This article will discuss the difference between rotary kiln and rotary dryer in the **cement production line**.



Figure: Rotary Kiln



Figure: Rotary Dryer



One of the basic differences between cement rotary kiln and rotary dryer is that cement rotary kiln can withstand higher temperatures than rotary dryer, and the operating temperature is between 800°C-1300°C, while the rotary dryer has a heating temperature of only 300°C.

Rotary kilns and rotary dryers both rely on heat transfer between materials and hot air to achieve drying. The **rotary kiln cylinder** is lined with refractory materials so that it can withstand higher temperatures than the rotary dryer. The heating temperature of the rotary dryer is lower, and there is no need to arrange a high-temperature resistant lining in the cylinder.

In terms of appearance, the diameter ratio and length ratio of the rotary kiln is generally more than 10, while the rotary dryer is generally less than 8. The length of the rotary kiln is usually very long, which is to ensure the complete calcination of the product when it is calcined.

In terms of technology, when the rotary dryer is working, the material is continuously thrown and scattered through the rotation of the cylinder, so that the material can be fully heated and dried. The process is simple and the operation is convenient. The main function of the rotary kiln is to calcinate the materials and fully oxidize the materials to achieve the best chemical reaction and meet the requirements of the production process. It is usually used after the classifier and magnetic separator in the beneficiation production line.

In terms of use: Rotary kiln is also called **calcining kiln**, or **rotary drum drying kiln**. It is mainly used for calcining raw materials that require high temperatures to change the properties of materials. For example, the cement clinker is calcined in cement plants, etc. In the field of industry and mining, all materials that need to be roasted need to be completed by rotary kilns. The rotary dryer is a piece of important drying equipment in beneficiation production. It specializes in drying materials. The main function is to dry ore raw materials. It is often used in beneficiation after ball mills and flotation machines, and can also be used to dry cement clinker, coal powder, slag and other raw materials.

When buying equipment, you must first distinguish between the functions and working principles of the two, so as to choose the right equipment. Great Wall Machinery has many years of experience in the production of rotary kilns and rotary dryers and can provide complete equipment and various related accessories. Welcome to inquire online.

