

CONDENSATION DRYER FOR SMALL PARTS

Safe, Fast and Gentle

Instead of conventional drying with acetone, a manufacturer of ceramic products now dries parts safely, quickly, gently and energy-efficiently in a specially modified condensation dryer.

Storage requirements, the use of fresh tanks and the disposal of old tanks, the use of chemicals and the related work effort for employees as well as insufficient quality due to the old drying process – these were all the disadvantages that CeramTec wanted to avoid. CeramTec AG in Marktredwitz, Germany, is a leading international manufacturer of technical ceramics and is specialised in the development, production and sales of products made of ceramic materials.

Through a supplier from the field of electroplating, the company heard about the drying solutions supplier Harter, whose energy-saving process met with great interest at CeramTec. After a detailed series of tests at Harter's technical centre, the company decided to use a so-called Airgenex dryer.

Integrated dehumidification module

This project was also a special one for Harter. Usually, parts are dried on a rack, in a drum or in a continuous flow process in a drying chamber to which the Airgenex module is connected. This is responsible for dehumidifying the air. At CeramTec, at the customer's request a dryer was developed for the first time that integrates both the Airgenex module and two drying chambers, each fitted with a ventilation fan.



At the customer's request, the dehumidification module and two drying chambers were integrated into the dryer unit.

The parts are fed into the dryer by a rack system with a perforated base plate. The rack system has a ventilated basket that is manually loaded with the parts to be dried. The doors to the drying chamber open upwards pneumatically and are controlled at the push of a button. The drying unit is not part of an automated process but is operated manually.

The parts to be dried are components for the electronics industry, usually metallised with tungsten and nickel and in

some cases additionally with gold. There is a huge variety of parts, with sizes ranging from 1 mm to 25 cm edge length.

For CeramTec, this specially developed dryer was the ideal solution. The many and varied components are now dried quickly and without problems. The low temperatures of the condensation drying process ensure that the parts are dried gently, and defects caused by drying are now a thing of the past. What is more, undesired heating of the products is avoided.

The drying process, with its heat recovery in a closed system, is also interesting for the operator from an energy point of view. With a power input of 8.8 kW, the dryer has a low power consumption and low carbon emissions. In addition, the dryer is easy to operate and requires little maintenance.

According to the company, the dryer is in operation every day and works to everyone's full satisfaction. —

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