Kraft Curing Systems GmbH, 49699 Lindern, Germany

## Seven new concrete curing systems integrated into existing concrete block lines

In the early summer of 2013 a well-known concrete block manufacturer from Central Europe ordered seven Quadrix II concrete curing systems from the German company Kraft Curing Systems. The newly developed Quadrix II from Kraft ranks among the highest quality and most effective concrete curing systems worldwide. With the aid of Quadrix II systems concrete achieves a very high quality and strength for the manufacture of high-quality paving slabs, concrete slabs and kerbstones.

The greatest challenge of the project was the integration of the seven Quadrix II units into the existing production lines within a few months, without endangering the flow of work and production. All systems had to be ready for operation by the agreed date so that all works could manufacture products of the same type in a comparably high quality. The simultaneous installation of seven systems represented a logistic challenge, which Kraft Curing Systems were able to overcome without problems and on time.

Kraft Curing Systems is a pioneer in the field of concrete curing. More than 670 Kraft curing systems are currently in use in the worldwide concrete industry. The Quadrix II concrete curing system was designed by Kraft Curing Systems especially for curing processes in which temperature and relative humidity have to be controlled separately. The appearance and quality of the final products is improved by the precise control of air circulation, temperature and humidity.

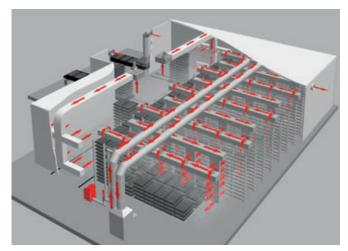
Quadrix II offers a completely newly developed air circulation concept based on intel-

ligent control of the air volume. Air flow speed and temperature fluctuations are considerably decreased. There is no draught that could lead to irregularities on the concrete surfaces. Although draughts are prevented, the temperature differences in the entire chamber area do not exceed +/- 1 °C. The much steadier climate in the curing environment leads to greater homogeneity of the products with regard to colour and the early and final strengths.

Each Quadrix II system contains a central heating element and an element for the air circulation, the heat exchanger and the exhaust system. Due to the modular design the components can be delivered separately and connected to the chamber on site. This enables simple installation even in buildings with restricted access and space. The stainless steel construction with an insulated housing guarantees a long service life, operational reliability and a constant high performance. Existing vapour generators made by Kraft can be integrated into the Quadrix II system (as was done with the seven curing systems mentioned above) in order to be able to utilise the advantages of the fine mist with regard to humidity and  ${\rm CO}_2$  content.

The Quadrix II system is operated and controlled by a Siemens S7 control unit. The software monitors the curing temperatures in the various areas inside the drying chamber and makes recommendations for the correction of the air flow. The real-time temperature and moisture curves are easy to pick out and read on the new 12" colour display of the Siemens controller. In addition, all user settings, operating information and functions of the burner, fan and other operating parameters can be read.

Quadrix II was developed for a temperature range of between 30 and 50 °C and a relative humidity of between 40% and 95% - these parameters can be adapted depending on the product and process. The sequence of the curing process is adjusted by the Kraft specialists according to the customer's needs, based on their know-how gained from 25 years of research and development in the field of controlled concrete curing.



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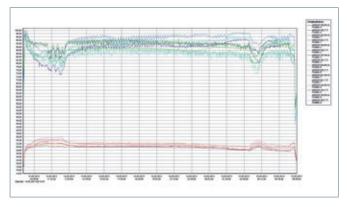


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#### CONCRETE PRODUCTS & CAST STONE



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Temperature and humidity curve – Quadrix II system

Since its establishment Kraft Curing Systems has dedicated itself to improving the efficiency and effectiveness of accelerated concrete curing whilst at the same time increasing product quality. Service prior to the sale, during the installation and also over the entire service life of the system are thereby an important part of the corporate philosophy of Kraft Curing Systems. The company will continue to work on the innovative further development of concrete curing.

#### FURTHER INFORMATION



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