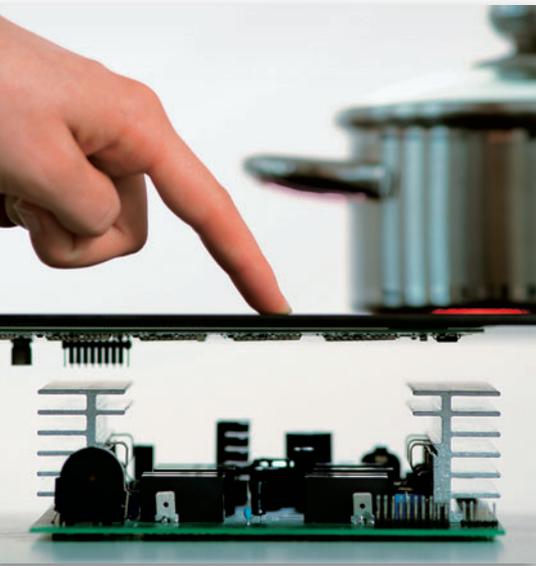


Convenient Cookers

Combined with intelligent control systems and "Ceran" cooktop panels, electronic touch technology offers greater convenience in high-quality cookers in North America. This system is now going to be introduced to the next targeted market: Europe.

► The cooking appliance reacts immediately after touching the scale on the glass ceramic surface. A circular cooking zone quickly heats up to a red-hot glow. The secret behind this technology is a printed circuit board with integrated touch cells below the cooktop panel. These cells generate an electrodynamic magnetic field, which emanates through non-conducting materials such as glass. This system is also able to distinguish between the touch of a finger and accidental contact with other objects. The cooking zone can thus only be electronically activated intentionally – without the use of mechanical switches, which are more difficult to keep clean.



The Touch Sensors react quickly to a human touch.

SCHOTT/Thomas Bauer

This is just one of the many positive features of this new technology. In combination with "Ceran" glass ceramic cooktop panels, a number of additional electronic functions are available, including on-off mechanisms, temperature controls, a childproof safety function, heating zone indicators and displays, an adjustment to determine the desired sensitivity and a preconfigured heating element settings. These features allow cooking appliance manufacturers to clearly differentiate their products.

System solutions with intelligent controls

"For cooking appliances of the next generation, we have combined the various expertises within our HomeTech Strategic Business Unit to provide a complete solution," explains Stefan Marc Schmidt, Vice President Sales & Marketing White Goods.

The first element of this solution is the patented touch cell developed by Touch-Sensor Technologies in Wheaton, Illinois, which is part of SCHOTT's HomeTech Strategic Business Unit (SBU). Unlike alternative technologies, the keypad works without software and is thus very reliable. It is fail-safe, easily adjustable and does not require constant recalibrating.

The new keypads with numerous touch-sensitive sensors can be placed in varying positions and give cooking appliance manufacturers the necessary flexibility in their designs. "Customers can integrate the touch keypads into their easy-to-clean appliances quickly and far more cost effectively than with traditional solutions such as membrane switches," says Thomas Schreiber, President of TouchSensor Technologies.

"The system is further perfected by the so-called 'SCHOTT Control,' developed by SCHOTT Sensors & Controls. This allows us to introduce completely new operating sys-

tems for the intelligent control of cooktops," says Dr. Jens Hoche, General Manager of SCHOTT Sensors & Controls.

With this new control system each heating element can be individually adjusted to single, double or triple circuit heating elements or a roasting dish area. In addition, the boil-up phases of the different cooking zones can be separately programmed. Integrated temperature sensors to limit temperatures, for example when working with empty cookware, are also available.

Unlike traditional control systems with electromechanical switches (relays), regulating the cooking appliances with electronic switches (triacs) allows a continuous power supply to the cooking zone. This leads to a better temperature consistency and thus improved cooking results. In the future, multicolored display elements will further increase the application and design possibilities.

Dacor is the first customer

The system was first implemented by Dacor Inc. Located in Los Angeles, California, the leading U.S. manufacturer of top-of-the-line cooking appliances presented a cooker with a "Ceran" cooktop panel, touch-sensitive keypad and a relay control system at the KBIS, the U.S. trade fair for household appliances, in April 2003. This project is an example of the strategy to pool know-how in order to be able to offer products and complete solutions from a single source as quickly as possible. "As part of our 'One-Stop Partner' philosophy, we can thus provide our customers worldwide with innovative and cost-effective solutions for their product generations of the future," explains Dr. Hoche.

Short development times

This extensive experience and expertise was already used for the development of touch systems for ovens, which SCHOTT has sup-



Touch Controls in cooking appliances with "Ceran" glass ceramic cooktop panels offer greater convenience in the kitchen.

SCHOTT/Thomas Bauer

plied worldwide since 2002. This technology provided the basis for follow-up products and allowed short innovation cycles.

After the launch and wider distribution of the system in North America, the next target region is Europe. Based on market analyses, there is a high potential for the application of touch control systems in cook-

ing appliances in the North American market. According to these findings, up to 10 percent of the glass ceramic cooktops in this market are currently equipped with touch control systems – and this trend is increasing. The future also looks promising for other target markets. TouchSensor Technologies has already sold more than one million touch sensors for application in a wide

range of areas including fitness equipment, coffee and espresso machines, medical and laboratory devices, vending machines and cooking appliances. ◀

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