

An Innovation Partner

Gemtron Corporation, a joint venture company in which SCHOTT has a majority interest, is a leading supplier and R & D partner to the North American home appliance industry.

► Symbolically speaking, the challenging project that U.S. home appliance manufacturer Maytag Corporation proposed to its supplier of many years all began in 1998 with a blank piece of paper. Maytag asked Gemtron to produce components for an innovative, luxury built-in refrigerator. It was a challenge perfectly suited to the highly diversified company with headquarters in Sweetwater, Tennessee, because of Gemtron's extensive expertise concentrated at its seven sites targeting specific market regions: Sweetwater, Vincennes, Holland, Wheaton, Madisonville for the United States; Midland for Canada and San Luis Potosi for Mexico.

The key element of Gemtron's comprehensive solution for Maytag's refrigerator is the innovative control panel. It consists of electronic touch keypads mounted to plastic-encapsulated printed glass. "We were the first in the United States to introduce this novel kind of electronic touch technology for control panels in refrigerators," says Gregg Schreiber, Sales & Marketing Director of TouchSensor Technologies in Wheaton, Illinois.

The TouchSensor touch technology, with over one million units in the field, can be used in other applications besides home appliances such as vending or fitness applications and offers several advantages over traditional switch technologies. Since the TouchSensor chip does not require any software, the complete user interface module can be integrated quickly and cost-effectively. Furthermore, because the technology is solid-state, there are no moving parts to wear out. The touch sensitivity can be easily adjusted per the customer specification. Additionally, backlighting can be added to enhance the user experience. In the case of

the Maytag refrigerator, when the user touches a keypad, a blue background light confirms the contact. But this innovative electronic system is just one of many Gemtron parts. The luxury-model refrigerator contains 21 components fabricated by Gemtron, some of which were developed specifically for this customer's project.

Six core competencies

Gemtron was founded in 1973 in Sweetwater, Tennessee, for the production of control panels for ranges. Ten years later, the U.S. company AFG Glass Industries bought Gemtron. SCHOTT then acquired a 51-percent interest in 1989, thus gaining a majority holding. "Gemtron is our leading subsidiary in the North American flat glass market and, similar to the business here with 'Ceran' glass ceramic cooktops, fully integrated into the global key account management of the White Goods Business Segment. Our customers clearly benefit from the synergistic effects of a globally operating technology company," stresses Dr. Hans-Joachim Konz, Vice President of the Home Tech Strategic Business Unit.

This alliance has spurred success: on average Gemtron has grown nine percent per year in the past decade and now generates annual sales of some 200 million U.S. dollars. A total of 1,325 employees work in six core areas of competence. They consist of

the traditional fields – bent and flat glass fabrication and molded product systems – as well as the growth sectors metal fabrication, electronics, coatings on glass and system development. Gemtron supplies its main market, the home appliance industry in North America, with these products and also serves the furniture and bath enclosures industries, as well as niche markets for electronic applications.

"Our extensive know-how is unique and enables us to fulfill a wide variety of customer requests. This expertise is also the source of innovation and improved efficiency that help create closer customer ties, greater competitiveness and new markets," says Gemtron's President Doug Roberts, explaining the corporate philosophy. The success of the company is based not least on fair, respectful and constructive relations with customers, shareholders, suppliers and employees. "Satisfying these groups is our prime focus," says Roberts. Since the founding, employees have benefited from the company's success, for example, through a profit-sharing scheme.

Surpassing the 100-million mark

The encapsulated refrigerator shelf is just one example of ingenious solutions. This Gemtron product integrates glass, metal and plastic components that used to be fabricated individually into a single unit, thus

Gemtron Corporation: a reliable partner

<i>Headquarters</i>	Sweetwater, Tennessee
<i>Sites</i>	seven locations in the U.S., Canada and Mexico
<i>Core competencies</i>	Glass Fabrication Molded Product Systems Coatings on Glass Metal Fabrication Electronics System Development
<i>Sales</i>	200 million U.S. dollars
<i>Employees</i>	1,325
<i>Interest</i>	SCHOTT 51 %



Gemtron Corporation

Gemtron Corporation has already produced more than 100 million plastic encapsulated shelves.

The various temperature zones of the U.S. Jenn-Air refrigerator can be individually adjusted with the help of touch sensor technology from Gemtron, which has contributed 21 components to the construction of this luxury refrigerator, produced by the U.S. home appliance manufacturer Maytag Corporation.

Maytag

triggering an enormous advance in U.S. refrigerator design in the mid-1990s. The innovative module offers many advantages: protection against overflow, simple cleaning plus time- and cost-saving assembly.

Today, encapsulated shelves are found in 40 percent of all U.S. refrigerators. Gemtron is market leader in the United States, supplying home appliance manufacturers such as Maytag, Whirlpool and General Electric. Last year Gemtron produced its 100 millionth encapsulated refrigerator shelf.

The flexibility in handling new challenges in terms of material, design and engineering has helped Gemtron in many projects, including the development and production of bent glass control panels, stainless steel and glass appliance fronts, or double-coated inner oven doors for self-cleaning ranges.

Design award for insulated glass front

The Gemtron site in Holland, Michigan, worked for the first time with insulated glass to find a new product solution for U-Line, a producer of wine coolers. The resulting glass front received a design award from the renowned trade magazine, "Modern Plastics."

The experts at Gemtron increasingly see the future in developing entire systems. "A successful product is more than the sum of its parts. The aim is to raise our customers' products to a higher level by working in close cooperation with them to develop modular and value-added systems," explains Mark Delp, Executive Vice President.

New alliances and expanding competencies are a part of this strategy – for example, by acquiring know-how in promising fields such as metal and stainless steel processing, for instance in electrocoating and powder coating. Gemtron can offer its customers, for example, encapsulated refrigerator shelves containing metal components from a single source. ◀

www.gemtron.com
www.touchsensor.com



Stainless steel kitchens are in fashion and even gaining in popularity.

Gemtron Corporation



This control panel front combines decorated glass, field effect touch technology and stainless steel – and all from a single source.

Gemtron Corporation



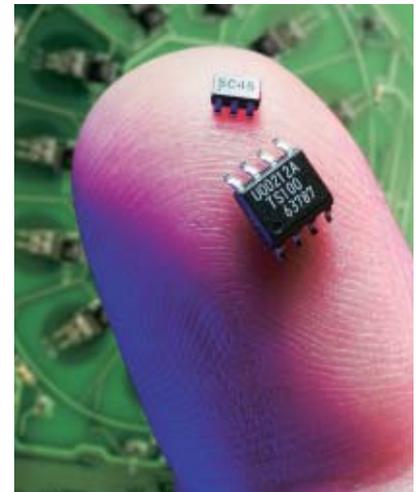
The fully automatic facility with stringent quality standards produces encapsulated shelves for refrigerators.

Gemtron Corporation

By touching the background illuminated electronic sensors, the temperature of the different refrigerator storage areas can be adjusted for vegetables, fruit or meat.



Gemtron Corporation



Gemtron Corporation