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## GameTime Molding Childhoods Through Play

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**At GameTime, its most important customers are children. This Alabama-based rotational molding operation develops imaginative, safer and more accessible playgrounds, helping to engage children in physically and mentally stimulating activities**

By Chad Sypkens



GameTime claims the Big Foot Slide is the largest one-piece slide in the world and the most monumental advance in slide technology since the one-piece spiral. It features three slides in one with curved extra-deep bedways that are individually configured with rails, moguls and banks.

GameTime, the largest manufacturer of modular and custom commercial outdoor playground equipment in the United States, rotationally molds more than 4 million pounds of linear low-density polyethylene (LLDPE) annually into nearly 300 different components and parts.

The Fort Payne, AL-based company with 500 employees rests on 84 acres in a 400,000 square-foot-facility and has been making playgrounds for 70 years. Products are designed, manufactured and marketed to educate, challenge, stimulate and entertain the mind while providing opportunities for very active or somewhat passive physical play. The molded products are utilized in GameTime's PowerScape, its premier play system that is responsible for over half of the entire business, as well as PrimeTime and TotTime and six other lines.

### Success Follows GameTime

GameTime has been manufacturing playground equipment to non-consumer markets, including municipalities, park districts, school districts and other playground equipment users, since its inception in 1929. It was initially owned by several companies in Linchfield, MI, including the major lawn mower supplier Toro. The Siragusa family purchased GameTime from Toro in 1979, moving it to Fort Payne, AL.

GameTime was bought by PlayCore Inc., a leading playground equipment and backyard products company in 1997. PlayCore added GameTime to its team of two similar operating units focused on commercial and consumer play and backyard wooden storage buildings: Swing•N•Slide, the market leader in the United States for do-it-yourself wooden playground equipment, and Heartland Industries, a leading manufacturer and marketer of installed backyard wooden storage buildings.

The three combined last year to help PlayCore to record sales of \$191,936,000.

According to Jerry Sterling, vice president of manufacturing and operations, GameTime's Dragon Slide is a prime example of the spirit of innovation that has fueled the company's success.

"Our leadership in ADA-accessible products are an example of how PlayCore people are shaping the direction of the industry," says Sterling.

The double-wide Dragon Slide is one of several ADA-accessible pieces of playground equipment which include a built-in sit-down area, extra high sides, extended exit area and smooth curved edges for the children's sliding experience." "The Swing•N•Slide and GameTime divisions have combined and shown a powerful illustration of cohesion on play systems for the children's playground market," explains Sterling. "Both GameTime and Swing•N•Slide are pursuing their respective growing markets and what is shared are the design and manufacturing capabilities of each division in order to achieve almost complete coverage of a target market. We also share best practice methods which will not only provide opportunities for cost reductions but will also serve as a clearinghouse to coordinate the major changes in technology in our business."

### GameTime.....Playground equipment and much more

The following are the many facets of GameTime and what they offer their customers. For more information, check out [www.gametime.com](http://www.gametime.com) or call (800) 235-2440.

**PowerScape** is GameTime's premier play system features patented factory-installed MegaLocs, 5-inch diameter galvanized steel or aluminum support posts, a 49-inch grid system, safer entry archways and a unique modular roof system.

**KidTime** offers the quality and innovation GameTime is known for to meet the developmental needs of children under age five. KidTime is an ability-based play system designed for three different groups: crawlers, toddlers and walkers.



**PrimeTime** brings the Utilitarian play system featuring an exclusive bolt-through fastening system, 31 $\frac{1}{2}$ -inch diameter galvanized steel or aluminum support posts, a 36-inch grid system and one-piece rotationally molded slides.

**TotTime's** reduced scale play system is designed specifically for two- through five-year-old players and features the PrimeTime bolt-through fastening system and 31 $\frac{1}{2}$ -inch diameter galvanized steel or aluminum support posts used in 36-inch modular grid system.

**GT Components** allows designers to layout their own playground choosing from over 150 components including one-piece rotationally molded slide chutes, innovative and challenging climbers, clever bridges and overhead ladders, imagination provoking interactive panels and adaptive tubes, Qubes and more.

**GT Action** brings action-packed play enhanced coordination through equipment movement. Products include track-rides, swings, speed-limited whirls, see-saw Buck-a-Bouts and spring action play such as SaddleMates and Cruisin' Mates.

**GT Events** offers stationary play activities promoting social interaction through traditional and theme climbing events, innovative giant one-piece slides, interactive play panels, balance beams and handicap accessible activities.

**GT Sports** includes Quality physical fitness and game equipment for individual and team activities including PE class, basketball, soccer, tennis, volleyball and baseball, plus Parcourse outdoor fitness circuits and centers.

**GTPark** and **Streetscape** furnishings including benches, litter receptacles, picnic tables, grills, campfire rings, bicycle racks and metal shelters.

## Rotational Molding Process



GameTime's 430 independent-arm rotational molder is one of four Ferry machines molding linear low density polyethylene into playground components at GameTime.

One of those changes as of late has become the popularity of rotational molding. According to Sterling, rotational molding is the fastest growing segment of the polymer industry.

This practice creates lightweight, seamless, stress-free parts of virtually any size in the most complex shapes. Rotationally molded products represent a wide range of materials, performance characteristics, colors, surface textures and finishes.

Rotational molding is a three-stage, no-pressure, plastic molding process that provides close tolerances and tight radii to afford interchangeable and interlocking components. The most common material molded by GameTime is LLDPE; HDPE, LDPE, PVC, fluorocarbons, polypropylene, nylon and polycarbonate are commonly used for rotational molding as well.

The molds utilized by GameTime are all cast aluminum and are primarily purchased from Wheeler Boyce Co. in Stow, OH. These molds receive a special Teflon coating applied by E.L Stone Co., which enables GameTime employees to do quicker color changes and makes the chore of demolding much easier.

GameTime operators mix their own product from a 100,000 pound silo using six mixers, weighing out the resin, placing it in the mold and locking it. Once clamped shut, the molds will go through several stages, being rotated in two axes at low speeds. Typically the major axis revolves four times to every one time of the minor axis. The speeds are slow enough that no centrifugal force is involved.

During the heating stage, the mold is sent into the oven for a preset time where it slowly rotates in two planes (bi-axial rotation) at temperatures ranging from 500F to 700F, creating a tumbling action. Heat transfer causes the plastic charge (resin) inside the mold to melt and as the heat penetrates the mold, the resin adheres to the mold's inner surface, uniformly coating the interior of the mold until it is completely fused.

During the second stage, the mold moves to the cooling station, where it is cooled by air and/or water spray. And in the final load/unload stage, the part is "demolded" or removed from the mold.

While the process starts over with a new charge of material loaded into the molds, the finished component then receives some secondary fabricating techniques that are necessary prior to shipping such as trimming paper-thin pieces of LLDPE which form along the groove where the two molds meet during processing.

## Four Molders Fit the Bill



GameTime began its molding operation with a single rotational molder, a Ferry Industries 430 Model, in 1982 with only three colors available and six operators. Today, those numbers have increased to four Ferry machines, three shifts, 38 operators and 16 standard colors. The 220, 280, 430 and 500 Ferry models go through 4 million pounds of LLDPE a year, with the 280 and 430 acting as the work horses of the four.

"The operators do more than just add the resin to the mold and send it through," says Sterling. "They are the added quality which we feel sets us apart from the rest. We have people who take pride in what they do, not only with the machinery, but the secondary operations as well: trimming, cutting, flaming or drilling. We have a great group of people working at GameTime from start to finish, all the way down to the complete inspection of parts throughout the process."

The four Ferry machines allow GameTime to provide increased processing capabilities while promoting the most efficient use of its labor force. A turret machine is provided with all arm assemblies fixed to a common indexing turret. Indexing the turret from station to station results in all the arms moving to the next station simultaneously.

GameTime's 280, 430 and 500 models operate with all the arms being independent of one another. GameTime utilizes the RS-500, with a swing of 200 inches and a weight capacity of 7,500 pounds, to run the much larger hollow components.

An example of a much larger, heavier molded part on its RS-500 is GameTime's latest hit slide, The Dragon, which consists of two large molds, one mold for the head and one for the body. Assembled with bolts which go through molded inserts, the Dragon is an 11-foot-high rotationally molded play apparatus which instantly turns a play equipment system into more of an amusement park.

"Customer response to this product has been incredible," says Sterling. "A product like the ADA-accessible Dragon illustrates two inherent strengths of our company: our innovative design talent, as well as our state-of-the-art manufacturing facilities that enable the production of such ambitious products. We continually challenge our product design teams to really get inside the minds of children, while appealing to the decision-maker's sense of safety and playfulness, in order to create a win-win situation for our customers and ourselves."

A lot of the tools or molds used to create the different polyethylene parts incorporate molded inserts to aid in assembly. The Rock and The Big Foot Slide are two examples of components using large two-piece molds with the inserts incorporated in the LLDPE piece.

### Custom Designs in No Time With GT CAD

Since 1997, GameTime's GT CAD software has assisted with KidTime Designs as it supplied informational videotapes, plus an organized kit to help guide groups step-by-step through the playground funding, creation and building process.

KidTime Designs can assist with the organization of future playground projects. From planning the fund-raising and publicity campaigns, creating the special design-day for kids, through construction day and the "dream-come-true" ribbon cutting ceremony.

KidTime Designs, the community built playground service, assists hundreds of schools and communities with fund raising and building new playgrounds every year helping make GameTime the largest manufacturer offering community built playgrounds in the world.

### Improved Efficiency

In the future GameTime will also begin to reap the benefits of a now-completed \$3.5 million plant expansion which will provide an additional 272,000 square feet of capacity and improved manufacturing efficiency.

"The additional square footage allowed us to situate production departments such that work flow would be more efficient," says Robert Farnsworth, president. "This will result in improved delivery time and overall product quality."

The changes included relocating the press and welding departments, which allowed for more space in the paint, hardware, shipping and Pentec departments. It also allowed space for additional loading docks bringing GameTime's total to 26; a new learning center for all types of training; a 5,580-square-foot product design center and improved receiving area.

"The expansion, moving and rearranging was completed in January and the changes are exceeding our expectations right now," says Sterling. "We have seen a big difference in all aspects of GameTime. The overall flow of material, especially the metals area, has been tremendous. Now that the departments are all in line, things flow a lot more smoothly."

"These improvements have and will continue to help us with our commitment to develop park and playground equipment that is creative, durable and above all & emdash; fun," says Sterling.



For the year 2000, GameTime introduces "America's fastest compliant slide chute," the CyberSlide which offers a very quick descent, ending in a slowing long runoff. The slide is attached to either a 5 1/2 or 8-foot platform, allowing children to attain the speed they desire without the intimidating climb required on traditional 12-foot and 14-foot-high slides.

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