

# JUGS SPORTS, INC.

## Hurling a fastball at pitching machine development with SolidWorks



*JUGS Sports implemented SolidWorks Professional design software to jump-start product development, reducing design time while simultaneously expanding its product line.*

JUGS Sports, Inc., has hit a home run since introducing the first baseball-pitching machine capable of throwing a curve ball several decades ago. Today, the Oregon-based company is the world's leading producer of baseball-pitching machines, softball-pitching machines, batting cages, radar guns, and other sports-related practice equipment trusted by professional and amateur athletes, as well as coaches, worldwide.

The company has expanded beyond its traditional focus on baseball and softball, developing ball-throwing systems for football, soccer, tennis, field hockey, and cricket. Not only does every Major League Baseball team use JUGS machines, every National Football League team and the professional cricket teams in India and Australia all have JUGS throwing machines.

As JUGS Sports has grown, so has its competition, which recently prompted the manufacturer to revamp its product development operation, according to Product Line Manager Greg Anderson. "For many years, the company benefited from being the first to market," Anderson explains. "Over the last 10 years, as competition exploded, JUGS Sports set a new direction to revitalize our product development operations, increase product innovation, and expand our product line into new areas, particularly the emerging youth recreational market."

To support its renewed product development push, JUGS Sports needed a 3D design system that would enable the manufacturer to efficiently expand its product line and introduce innovative concepts. Anderson says he tried using the Adobe® Freehand® and Rhino® design applications, but found them to be difficult to use. In 2008, Dr. Robert Harder, an engineering professor at George Fox University, recommended that Anderson take a look at SolidWorks® 3D design software.

"It was immediately obvious that SolidWorks was the perfect fit for us," Anderson says. "Our development is a unique blend of artistic and technical design elements. SolidWorks is easy to use and enables us to capture both aspects in the development of new products."

### Challenge:

Expand the company's pitching machine, radar gun, and ball-throwing system product line to capture new markets while at the same time increasing innovation and productivity.

### Solution:

Implement SolidWorks Professional software to take advantage of virtual design iterations and advanced visualization tools.

### Results:

- Reduced development time by 50 percent
- Cut time from design to prototype in half
- Expanded product line to capture youth market
- Increased product innovation

JUGS Sports chose SolidWorks Professional software to jump-start new product development because it is easy to use and helps the company visualize and interrogate new design concepts.

### Faster development cycles

After implementing SolidWorks software, JUGS Sports realized substantial productivity improvements, reducing its product development cycles by 50 percent. This increased efficiency is essential to executing the company's new direction and achieving its ambitious product goals.

"SolidWorks software gives us the freedom to quickly develop a design, simulate its performance, check for interferences, and create a prototype," Anderson points out. "Using SolidWorks, it only takes us half the time to go from an initial design concept to an actual prototype. We're achieving these efficiency improvements while maintaining the high levels of quality for which we are known."

### Expanding product development

The productivity gains provided by SolidWorks software have enabled JUGS Sports to substantially ramp up its new product development effort. Since implementing the software, the company has begun developing 18 new products. Three of these have already been introduced—the first new products that the manufacturer has released in years.

"Our machines are known for their reliability and longevity, which is why many of the machines that we produced 40 years ago are still in use today," Anderson notes. "With SolidWorks software, we are ready to extend the development of quality products to the burgeoning youth market. Athletes ages eight to adult represent our traditional customer base, but we are now developing more innovative machines for a much younger and broader market.

"For example, on the Perfect Strike 50 (PS-50) pitching machine, we employed a single-wheel drive mechanism within a much smaller, more compact unit." Anderson adds. "The Perfect Strike machine delivers more consistent ball placement, hence the name, which is more desirable for a batter who is learning how to hit."

### Photorealism improves communication

Working with a range of international customers and manufacturing partners, JUGS Sports uses SolidWorks design visualization tools to overcome communication barriers that can cause misunderstandings and errors, and stymie manufacturing efficiencies. The company uses SolidWorks PhotoView 360 tools to create photorealistic renderings of its products, and leverages SolidWorks capabilities to create animations of how its machines operate.

"Renderings and animations of design concepts are real benefits to our company," Anderson stresses. "In addition to demonstrating our use of advanced design technologies, these virtual images provide a better representation of how the machine goes together and will ultimately function."

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Greg Anderson  
Product Line Manager



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