

BRUDDEN EQUIPMENT LTD.

ACHIEVING A FITNESS EQUIPMENT MARKET LEADERSHIP POSITION WITH SOLIDWORKS SOLUTIONS



Using SOLIDWORKS design, simulation, and technical communication solutions, Brudden shortened time-to-market and increased product development throughput for its award-winning Movement line of physical fitness equipment.

 **Brudden**
EQUIPAMENTOS

movement 
FITNESS EQUIPMENT

Challenge:

Further establish and expand product offerings for agricultural machinery, fitness equipment, and recreational boat brands by streamlining development, reducing reliance on physical prototyping, and shortening time-to-market.

Solution:

Implement SOLIDWORKS Standard design, SOLIDWORKS Professional design, SOLIDWORKS Premium design and analysis, SOLIDWORKS Simulation Premium analysis, and SOLIDWORKS Composer technical communication software solutions.

Benefits:

- Shortened product time-to-market by 25 to 30 percent
- Cut prototyping costs by 40 percent
- Quadrupled annual new-product development throughput
- Won 2015 international iF Design and 2017 European Product Design awards

Although Brudden Equipment Ltd. is known throughout Latin America as the manufacturer of the Brudden® brand of agricultural machinery, the company also produces recreational kayaks, as well as the market-leading Movement® brand of physical fitness equipment. The company's dedication to innovation, quality, and trust extends across its brands as part of its founding commitment to develop innovative products, services, and solutions that meet its customers' needs for leisure, well-being, and comfort.

Established in Brazil in 1980, Brudden's product development initiatives have grown out of its founding mission, resulting in the introduction of the award-winning Movement line of physical fitness products in 1998. "The company leveraged its expertise in agricultural products and its relationship with the Biomechanics Laboratory at the University of Sao Paulo to become the first Brazilian company to enter the fitness market," recalls Engineering Manager Victor E. F. Xavier. "Since then, we have achieved the largest market share in the Latin and South American fitness equipment market."

Today, Movement products cater to all sizes of gyms, studios, condos, clubs, hotels, clinics, and personal residences. The line has also garnered the prestigious international 2015 iF Design Award, which recognized the brand's design excellence out of more than 5,000 submissions from 70 countries, as well as the 2017 European Product Design Award. Xavier says the company's growth and product expansion led to a re-evaluation in 2007 of the Mechanical Desktop® and Autodesk® Inventor® design tools it used as part of Brudden's efforts to shorten product development, improve quality, and reduce time-to-market.

"We wanted to streamline and accelerate development—with faster solutions for handling sheet metal, complex geometries requiring surfacing, and integrated design analysis—to support our product line expansion and need for greater throughput," Xavier explains.

After evaluating the Pro/ENGINEER® and SOLIDWORKS® 3D design systems, Brudden standardized on SOLIDWORKS solutions, implementing SOLIDWORKS Standard design, SOLIDWORKS Professional design, SOLIDWORKS Premium design and analysis, SOLIDWORKS Simulation Premium analysis, and SOLIDWORKS Composer™ technical communication software. "We chose SOLIDWORKS because it had the shortest learning curve, was competitively priced, and provided access to integrated engineering tools," Xavier recounts. "SOLIDWORKS was simply the best solution for introducing 3D design across Brudden."

SHORTER TIME-TO-MARKET, INCREASED THROUGHPUT

Since implementing SOLIDWORKS solutions, Brudden has achieved its product development goals, reducing time-to-market from 19 to 24 months to 13 to 18 months (a 25 to 30 percent reduction), and quadrupling annual new-product output from five new products each year to 19. "The move to SOLIDWORKS was an important factor because the solution enabled us to create a library of standardized parts and assemblies, including part and assembly configurations," Xavier explains.

"With better tools for handling sheet metal and complex surfaces, and a library of part and assembly configurations, product development is much faster, resulting in shorter time-to-market," Xavier adds. "We're also more efficient whenever we need to make design changes or implement engineering change orders [ECOs], due to the parametric nature of SOLIDWORKS."

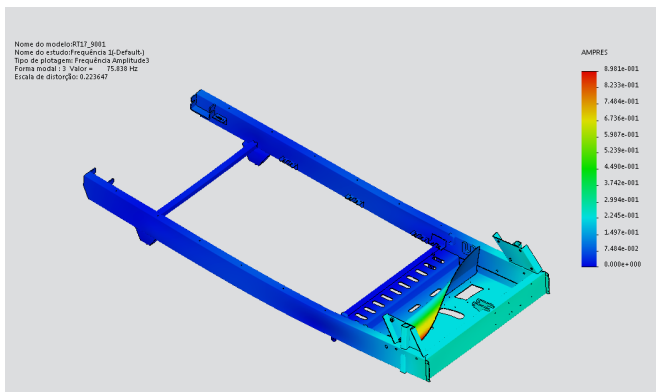


"SOLIDWORKS was simply the best solution for introducing 3D design across Brudden."

— Victor E. F. Xavier, Engineering Manager

CUTTING COSTS, IMPROVING PERFORMANCE WITH SIMULATION

In addition to helping Brudden compress design cycles and shorten time-to-market, SOLIDWORKS solutions enable the company to reduce prototyping requirements, and associated costs, while simultaneously improving product quality and performance with SOLIDWORKS Simulation tools. "Before we implemented SOLIDWORKS, most finite element analysis [FEA] was outsourced to a consultant, primarily for validation at the end of development," Xavier notes.



With SOLIDWORKS Simulation Premium software, Brudden has reduced prototyping requirements, and associated costs, while simultaneously improving product quality and performance.

Focus on Brudden Equipment Ltd.
 VAR: IST Systems, Americana, Sao Paulo, Brazil

Headquarters: Av Industrial 700 – Industrial District
 Pompéia, Sao Paulo 17580-000
 Brazil
 Phone: +55 14 3405 5000

For more information
www.brudden.com.br | www.movement.com.br

“Using SOLIDWORKS Simulation Premium and the analysis capabilities of SOLIDWORKS Premium, we now run analyses more frequently and as part of initial design. Instead of needing four or five physical prototypes during development, we now require only two or three,” Xavier continues. “We not only have enjoyed a 40 percent reduction in prototyping costs as a result, we also have improved product quality, expanded our knowledge of design performance, and increased our confidence in our products.”

BETTER USER MANUALS IN LESS TIME

With SOLIDWORKS Composer technical communication software, Brudden has also improved the quality of its user manuals and product documentation, while reducing the time and effort required to create them. “In the past, we worked with an outside company to create illustrations for our manuals,” Xavier points out. “With the development of so many products and with so many products changing frequently—and the greater need to improve documentation quality in a broader market—that approach had become unmanageable.

“SOLIDWORKS Composer is a wonderful tool because it allows us to leverage our SOLIDWORKS CAD data to easily and quickly create the illustrations that we need,” Xavier stresses. “Our illustrations include greater detail, the quality of the manuals has greatly improved, and we’re able to create product documentation—and sales materials—in less time.”

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes’ collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 210,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.

