

## ESAB cuts cycle times by 25% with SpaceMouse® and Solidworks®



As the world's leading producer of welding machines, ESAB is constantly looking for ways to best serve its fast growing customer base. Over seven thousand employees provide welding and cutting equipment to a wide range of companies including the automotive, aerospace, marine,

architectural, construction and general engineering industries. An annual revenue of approximately one billion dollars makes maximized efficiency and productivity imperative. ESAB's new generation of welding machines now allows them to enter new and larger markets and also introduce new products faster. As part of a major program streamlining the organization to keep up with increased sales volumes, 3Dconnexion's SpaceMouse and SolidWorks were introduced to the design team. The results were immediately convincing, with cycle times dropping by twenty-five percent.



### Dramatic Productivity Gains

ESAB designer Joseph Saliba and his colleagues were quickly convinced that working with a motion controller and mouse together is the most natural and efficient way to work. "It's obvious you are more efficient if you use two hands instead of one. It's the same in real life," said Saliba. "Just take the example of peeling a fruit. It's very difficult to do with only one hand. You hold the fruit with one hand and peel it with the other."

"This translates directly to working with 3D CAD models: you navigate the model with the 3D controller in your left hand and manipulate the models with commands from the standard mouse in your right hand."

Completing design tasks in the design process first without and then with a motion controller clearly proved the value of ESAB's investment. Being able to intuitively navigate and position their 3D models with one hand while simultaneously giving commands with the standard mouse in the other provided dramatic productivity gains.

An operation that took thirty-seven minutes to be completed with just the mouse and keyboard was shortened to just eighteen minutes with the SpaceMouse. A task that required eighteen mouse clicks and thirty-two seconds to finish was reduced to six mouse clicks and only eighteen seconds.

### The Best Tools for the Job

When ESAB decided to make the move from 2D CAD to an efficient 3D CAD application integrated in a PDM system, several applications were evaluated before SolidWorks and SmarTeam were chosen to work together with the SpaceMouse.

"We decided to go for SolidWorks," Joseph reported, "Since it is, as far as I know, the only mid-range 3D CAD application that fully supports custom based configuration. Plus, it is really smooth and flexible to work with and easy to learn. It makes you feel like when you were a child playing with Legos."

When the company moved into a 3D design space, it was important that the designers were given the proper 3D tools to take full advantage of the software. Joseph continued, "In order to make the design and construction work even more efficient, we decided all the designers should use the SpaceMouse from the very beginning."

Mr. Saliba recalled the day he had to work from home to fix a problem without his SpaceMouse. "It felt strange and frustrating. My left arm began to flounder every time I tried to move an object. Even if I work in 2D, I use the motion controller for easy panning of a drawing. It's the natural way to work."

**"Every design engineer gets top quality tools to create top quality new machines."**

### A Positive Experience

At ESAB, the transition to SpaceMouse and SolidWorks has been a success. Bengt Karlsson, a construction manager at ESAB Welding Equipment, also reported significant time savings. It used to take him twelve months to develop a welding machine and with the new software and motion controller it has been cut down to nine months.

In order ensure the continued growth and success of their company, ESAB makes sure its designers are equipped with the best tools available. Designer Joseph Saliba concludes, "What is most important to us is that every design engineer gets top quality tools to create top quality new machines. Our success proves us right."

