Award-Winning Boat Designed Thanks to 3Dconnexion 3D Mice

3D Mouse: SpaceMouse® Pro, SpaceNavigator®

3D Application: Rhinoceros®

For boat builders, the devil is in the details. How do you build a luxury watercraft that offers the power to top swells but also includes the sort of consumer comforts to make everyone on board feel at home?

It's not an easy plank to walk. And boat designers must balance all of these components while remaining conscious of a watercraft's severely limited space.

The Marex 320 ACC, produced by Norwegian boat company Marex, balances competing priorities perfectly—thanks to stellar 3D design made possible by some killer 3D design tools.

The aft-cabin cruiser's design has been called "one of the great conjuring feats of our time" by Motor Boats Monthly and the boat has won several prestigious awards. But the most impressive part is that it was drawn in 3D by one man—with help from 3Dconnexion 3D mice.

A High-Performing Boat in a Consumer Package

The Marex 320 ACC does what few other boats under 35 feet can: it delivers boating performance in a package that's also family-friendly, spacious and accommodating.

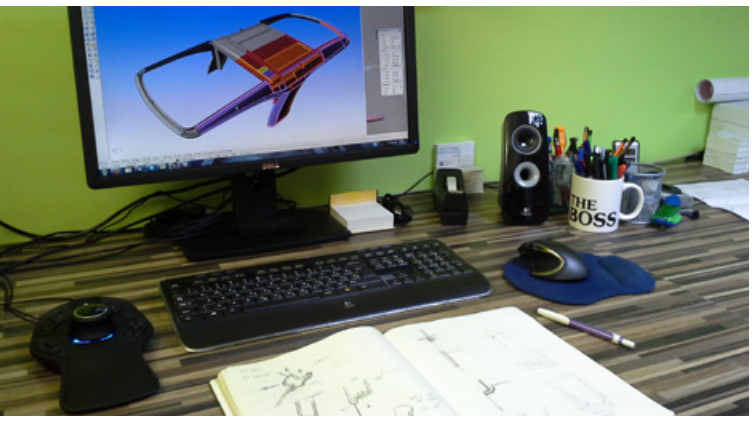
The Marex 320 ACC has two living spaces—one fore, one aft—and a spacious saloon in the center that divides the cabins for maximum privacy. Reaching up to 25 knots with a Volvo shaft drive engine, the Marex 320 ACC also provides creature comforts: including a massive retractable roof and 180-degree aft cabin window.

And it is all a product of close cooperation with Marex CEO, Espen Aalrud, and an intrepid 3D professional.

Kristijan Nikl is founder of Nikl Design, a boat design and development outfit located in Ljubljana, Slovenia. He drew the entire Marex 320 ACC, using a 3D workstation and a 3Dconnexion 3D mouse.

Nikl was hired to draw the Marex 320 ACC by Marex after his work on the boat's big sister, the Marex 370 ACC. The craft presented unique challenges.
When Nikl worked on the Marex 370 ACC, he'd been part of a team. Now, he ran his own solo design shop. Not only was he trusted with the entire 3D work of a new boat, but he was also staking his company's future success on the project.

Marex envisioned two private, spacious cabins—one fore and one aft—to prove the aft cruiser design concept could work in a smaller boat. Fitting everything into a smaller boat is always a challenge, but Nikl took it on anyway and the Marex 320 ACC was born.



Kristijan's workspace with SpaceMouse® Pro

Kristijan (left) and Espen Aaruld, CEO of Marex winning the 2013 European Powerboat Boat of the Year award.

"It's unheard of to have two headroom cabins on a 10 meter long (32 ft.) boat and still have full privacy," says Nikl. With little room for error (or anything else), design precision was the difference between success and failure.

All of the features had to be completely production friendly—Marex couldn't afford multiple prototype corrections and design adjustments. Nikl needed a 3D design tool that provided unparalleled accuracy and improved productivity if he wanted to pull off the Marex 320 ACC design.

That's why he chose a 3Dconnexion 3D mouse.

The Right Tools for the Job

A 3Dconnexion 3D mouse provides 6-degrees-of-freedom navigation and a more productive, accurate and enjoyable design experience. Used by your non-dominant hand, you gently move the controller cap to simultaneously pan, zoom, tilt and rotate your 3D content while the standard mouse in your dominant hand clicks and selects on-screen items.

This cooperative, two-handed workflow gives you a deeper connection to your model, improves design accuracy and has significant productivity benefits. In fact, 84% of designers report improvements in error detection when using a 3D mouse. They also see average productivity gains of 21% when using the devices (download the report here >>).

Nikl used a SpaceNavigator® and more recently a SpaceMouse® Pro in conjunction with a workstation running McNeel Rhinoceros. The 3D mouse's two-handed workflow made it easier to inspect content closely, identify errors and improve design quality-features that made it indispensable for the precise component placement on the Marex 320 ACC. The 3Dconnexion 3D mouse didn't just help Nikl design better; it also helped him design faster. That was a serious advantage on a project where all the design work fell on his shoulders. Says Nikl, "It would have taken much longer to complete the project without a 3D mouse."

Unparalleled Accuracy and Industry Awards

The Marex 320 ACC took Nikl two years to complete. That included all of the CAD work, surface and furniture modeling, 2D documentation and real-time production support.

The finished product made waves. The Marex 320 ACC won Motor Boat Monthly's Motor Boat of the Year 2013 award, the European Yacht of the Year 2013 award and the Best Boat prize at the 2013 Oslo International Boat Show.

The boat is also a production line success. It has a 2 mm. tolerance, so that all parts join together with virtually no adjustment needed. That kind of precision was thanks to Nikl's design acumen and his 3Dconnexion 3D mouse.

"Without the 3D mouse, I would never have been able to do as much as I did," he says. "It is indispensable gear when it comes to 3D design. You must experience one."

What's next for Nikl and Marex? Currently they are building a prototype of their largest boat to date, the Marex 375.

Is it time for your designs to set sail?
Check out 3Dconnexion today.

For more on Nikl's design processes and work, visit the Nikl Designs website.