Roland MDX Case Study – Antonio Scaffidi's

Creating Intelligently Designed Furniture

How do you design a chair that successfully addresses the challenge of sitting comfortably at a table? This was the question furniture designer Antonio Scaffidi asked himself when creating his beautifully simple Nyx chair. A graduate of the highly acclaimed Danish Design School in Copenhagen with several years of furniture design experience, Scaffidi set out to explore the world of chair design, which he thinks offers the opportunity "to capture a furniture designer in an exciting process of assessing form, mechanics, ergonomics and material use."

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To produce his designs, Scaffidi uses the MDX-540 Subtractive Rapid Prototyping milling machine. With its unmatched quality and performance as well as its powerful production options and its ability to mill a wide variety of materials, the MDX-540 has helped Scaffidi transform his 3D computer designs into tangible models and forms. "Often I mill my own molding and shaping tools which I then use to produce the desired forms indirectly, through vacuum shaping, casts, etc.," he said. "It is also possible to mill models from a variety of materials which allows me to create the design with accurate physical properties."

The Nyx chair was milled from several different materials. The frame was made of Ureol material and aluminum, and the seating shell was milled from DIAB foam material. The outer shell is vacuum shaped with the help of a shaping tool Scaffidi created. Last, the frame and outer shell were painted and the chair was upholstered with leather. The result is an ergonomically correct and very accurate prototype of the Nyx chair, which will be evaluated in design presentations aimed at interested furniture manufacturers and consumers.

Antonio Scaffidi's Nyx chair was nominated for the Danish Association of Wood and Furniture Industries Avantgarde Prize in 2009 and won second place.

Additional information: http://www.scaffidi.dk; http://ta.di.dk/