KIDO Sports Innovates Helmet Prototyping with 3D Printing

Raise3D Case Study
https://www.raise3d.com/case/kido-sports-innovates-helmet-prototyping-with-3d-printing/

“Raise3D printer is quite reliable. Besides, its quality is awesome. The biggest advantage of using it is saving both time and research funds”. -Manager Kim wan.

KIDO Sports CO. Ltd is a motorcycle helmet manufacturer located in Seoul, South Korea. KIDO Sports combines 3D printing technology with design aesthetics to create more high-tech and artistic helmets, successfully working around prototyping limitations.

Traditional Prototyping Had Low Efficiency

Before using 3D printing to make helmet prototypes, KIDO Sports could only outsource prototype development to third-party companies. Third-party companies used traditional prototyping methods, such as pouring, to make helmet models. Engineers spent too much time fabricating and assembling individual parts, and this process consumed a lot of materials and time. During the production process, if the original model was slightly damaged, the entire model needed to be remade.

Third-party companies also use CNC technology to prototype. However, there are several aspects of the CNC process that can make the prototyping process inefficient. To get around these obstacles, KIDO Sports chose 3D printing for prototyping technology, ultimately reducing production costs and improving efficiency.

Raise3D Helps Rapid Prototyping and Prints Better Models

KIDO Sports uses Raise3D Pro2 Plus printer to print the helmet model

KIDO Sports used Raise3D N2 and Raise3D Pro2 Plus 3D printers to prototype different helmet models. Raise3D's Pro2 Series printers have an extrusion layer thickness of .01 mm and maintain high-precision and stable extrusion, providing a precise internal structure and smooth surface for the helmet model.

The Pro2 printer also provides a larger build volume, up to 300x300x300 mm and 300x300x600mm, enabling KIDO Sports to print motorcycle helmet models of various shapes and sizes.

Kim Wan, Manager of KIDO Sports, said "As you can see, most of the printed models in our field are very large, so we want reliable 3D printers and Raise3D's Pro2 Plus meets our needs".

Raise3D printer Makes Model Verification Simple and Easier to Operate

Raise3D Pro2 Plus printer makes model verification simple and easier to operate.

The Raise3D printer makes model verification simple and easy to operate. Users only need to use a 3D slicer to set up the printing instructions, then upload the model to the printer. Once the 3D printer receives the design file, it can print the entire model quickly without needing manual operation. Since 3D printers use melted filaments that are printed layer by layer until the entire model is formed, objects with special structures and cavities, such as motorcycle helmets, can be printed easily.

By 3D printing helmet models, KIDO Sports maintains that the entire prototyping process is in-house, removing the necessity of third-party contractors and any extra communication. As a result, KIDO Sports found the prototyping process became faster. Manager Kim wan said, “After using the printer provided by Raise3D, the speed of prototyping has been increased by 5 times, and the entire process has been shortened by 40%.”

3D Printing Makes the Helmet Model More Customer-Oriented

KIDO Sports uses 3D printing technology to obtain a personalized helmet model.

KIDO Sports implements small-batch manufacturing to edit and test new, aerodynamic helmet designs, customized to the motorcycle rider's head before mass-producing the designs. By using 3D printing to create models of new helmet designs, KIDO Sports can edit and test new designs cost-effectively. The Raise3D Pro2 Plus printer prints models with high production efficiency, meeting KIDO Sport's small-batch manufacturing requirements. Raise3D printers also have the necessary precision to produce the necessary details of the model.

3D printing also gives KIDO Sports the flexibility to create helmets with different filaments. Different filaments have different characteristics which mean helmets made with different filaments can be tested for different performances. Both Raise3D filaments and the Open Filament Program (OFP) provide KIDO Sports with a range of more advanced 3D printing materials such as ABS, TPU and carbon fiber for a wider variety of tests and potential solutions.

KIDO Sports Continues to Explore 3D Printing

Due to KIDO Sport's implementation of 3D printing technology, KIDO Sports can print helmet models of various shapes and sizes cost-effectively, KIDO Sports greatly improved the efficiency of their model verification process. Due to the success of printing the helmet models, KIDO Sports plans on utilizing Raise3D printers to explore more application areas and produce fixtures and temporary parts.

Raise3D printer's production quality and efficiency provide more value to KIDO Sport's prototyping. Raise3D produces more new materials and customized small-batch production methods resulting in an accelerated pace of KIDO Sports helmet manufacturing.

Connect with Raise3D

Do you have a great 3D printing success story and think it would be cool to be featured on www.raise3d.com, we would love to learn more! Write to us at inquiry@raise3d.com

For more information about Raise3D printers and services, browse our website, or schedule a demo with one of our 3D printing experts.