

EMS Builds Scaled Model for L3 Brashear

L3 Brashear develops and manufactures large diameter optics and telescopes for military applications. These telescopes are mounted on vehicles, marine vessels, aircraft and ground based units and are used for surveillance, fire control and target tracking.

The Problem

L3 wanted to have a scaled model of one of their new telescopes for an upcoming trade show. The trade show was fast approaching and creating a hand made model would take far too long. The telescopes are very complex and have many moving parts. L3 thought rapid prototyping may be the best solution to create a realistic 3D model.

The Solution

L3 contacted EMS and discussed what they needed. Specifically they wanted a scaled model of the telescope that could rotate and move. This would allow them to demonstrate the capabilities of the telescope at the trade show. EMS got to work and used their Z Corp Z650 3D printer to print the model. The completed model stood about 18 inches tall and was made up of several pieces.

The advantage of the Z Corp 3D Printing technology is that it's so fast they were able to print all the pieces in one day on two of their Z650 3D Printers. Once the pieces were 3D printed they were assembled together to make a movable model. The final step was to paint the model and add decals. This gave the model the look and feel of a real telescope.

Another advantage to the Z Corp technology is you can make parts hollow and drain out the unused material to be reused. This can save a lot of money on large bulky part. EMS made the base of the telescope hollow using their Magic RP software. Magic RP is a very powerful STL editing program that allows users to hollow, thicken, remove and edit any features in an STL file. Many other rapid prototyping and 3D printing technologies can't do this because they use support structures to build their models. These support structures must be removed and are a waste product.

Conclusion

The scaled model EMS built was a huge success for L3 and helped in securing many new orders for their new telescope.

When it comes time to create a highly detailed, authentic looking scaled model in a very short time EMS has the hardware, software and technical knowledge to get the job done.

To learn more visit www.ems-usa.com



Full size telescope being assembled



Prototype scale model



Finish model with paint and decals