

SHAPEWAYS × VOYTEK 

TRANSFORMING HEALTHCARE



VOYTEK MEDICAL IS TRANSFORMING THE LANDSCAPE OF HEALTHCARE.

Voytek develops products designed to lock all patient cables to a desired bedside monitor or roll stand without voiding warranties or modifying equipment. They offer a variety of options and lengths, which are saving healthcare institutions money by securing their investments in equipment and devices.

WHAT IS THE BIGGEST BENEFIT OF USING SHAPEWAYS 3D MANUFACTURING OVER TRADITIONAL MANUFACTURING METHODS (E.G. INJECTION MOLDING)?

Cost. As a start-up without outside investment or partners, I am unable to pay tens of

thousands of dollars for injection molding. Shapeways allows me the flexibility to improve my design over time, while testing the marketplace in a for what products sell best. This methodology makes financial sense by reducing the company's initial overhead and risk, allowing us to grow and thrive at a comfortable and manageable pace.



WHAT IS THE BENEFIT OF USING SHAPEWAYS OVER A DESKTOP 3D PRINTER?

Voytek has always been a big proponent of desktop 3D printing, it has its benefits and limitations. Desktop 3D printing is great for prototyping and making changes on the fly and testing different designs. Where that technology begins to fall short is in the build quality of the materials, and production times. I would not be able to fulfill orders on a desktop printer, the labor alone would sink the turnaround time. Shapeways allows me to get large batch orders quickly and without cosmetic or build quality flaws.

WHY IS VERSATILE PLASTIC GREAT FOR THE MEDICAL INDUSTRY?

In our testing hospital cleaning chemicals had no effect on the finish or hardness of the plastic. These chemicals are known to destroy some plastic surfaces by making them more brittle, etching and fogging on clear membranes of other equipment. In destruction testing the material withstood all tools available to hospital staff on a regular basis.

WHICH MATERIALS HAVE YOU TRIED AND WHICH WORK BEST FOR YOUR BUSINESS? WHY?

In the trial and error phase of our designing the use of extrusion desktop 3D printing in ABS was the best option available to us at the time. This material was far from precise, very brittle, and the layers tended to separate over time. From that point stereolithography was used that brought us into the world of really designing with a purpose and good quality. The resin was brittle and dust and other mirror issues made consistent prints impossible to mass manufacture. Once we tested Shapeways products we were using the HP high quality prints, which has no issues at all, the only reason to change to the current material was cost and profitability of the company. Both processes exceeded our requirements in destruction testing.

WHAT ARE THE ADDED BENEFITS OF USING SHAPEWAYS OVER A DIFFERENT VENDOR OUTSIDE OF OUR 3D PRINTING CAPABILITIES?

Voytek Medical only uses Shapeways as a 3D production facility, customer service has been



nothing short of phenomenal thus far, turn around times have been accurate and timely.

WHAT IS THE MOST IMPORTANT TRAIT OF A PRODUCT PRINTED BY SHAPEWAYS?

Shapeways materials have exceeded our performance testing, we have received no returns due to manufacturer defects from the 300+ units sold over the past 6 months (We began sales in June of 2018). Aesthetically speaking the parts have been precise and dimensionally it has been very close, only extra step we have to take is clean out some material from parts that lock together, the black color we chose to use makes parts that have a front and back case a little tighter than desirable. A quick pass with a drill bit clears out the material and makes it work as intended.