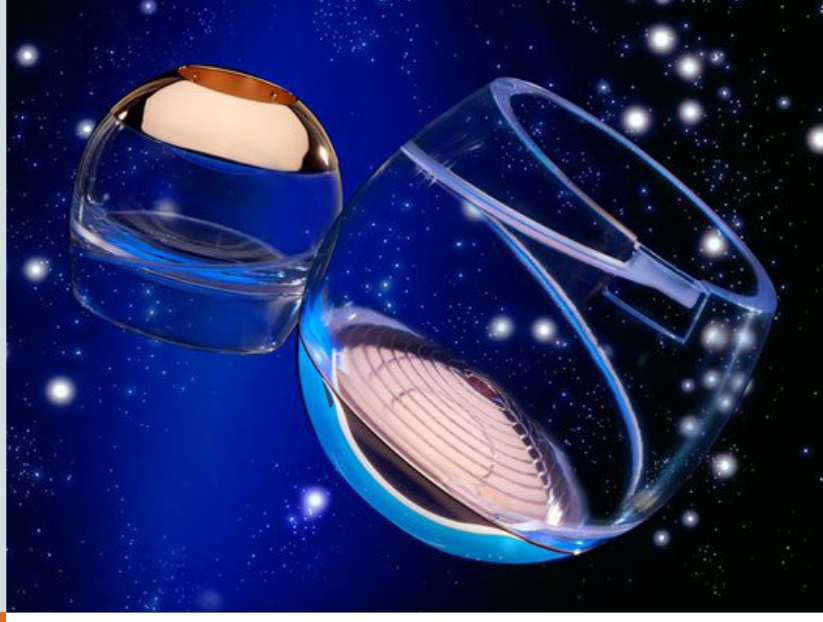
Microgravity whisky glass



Case Study

Client: Trillium Technologies & Ballantine's Whisky
Sector: Product Design
Visual & space testing
Process: SLA, paint & finishing

Trillium Technologies is a company dedicated to developing systems and technologies that tackle today's grand challenges. Working with global organisations and start-ups, Trillium was approached by Ballantine's to create the world's first whisky glass engineered to work in microgravity.

To deliver a prototype that would withstand rigorous space testing, Trillium looked to Ogle for the solution.

ogle
models+prototypes

www.oglemodels.com
info@oglemodels.com
+44 (0)1462 682 661

Ogle determined that SLA was the best additive process to meet the precise specifications, within strict lead times and to deliver a superior surface finish. Levels of accuracy that can be achieved using Ogle's SLA Viper machines can meet +0.1mm per 100mm. To ensure the prototype was as visually realistic as possible, Ogle selected ClearVue as the chosen resin for production. This plastic simulates the properties and appearance of Polycarbonate and ABS; it has a high tensile strength for an SLA, and once lacquered is the perfect material for resisting humidity and moisture. Following production, the part was hand finished inside and out using 800 wet grade paper to remove any layering and give a smooth texture. To bring out the clarity of the part it was masked and clear lacquered on the inside and outside for a glass-like appearance.

When finalised, the glass had six component parts, so it was imperative that the team at Ogle completed comprehensive pre and post production checks. This included applying the supplied rose gold plated base to ensure the thread would fit and engage correctly with enough clearance for the paint team. Whilst gold is frequently selected for use in space due to its deflective radiation components, its use in the glass was to harness the unreactive properties that prevent the glass affecting the taste of the whisky.

Jordan McRae, Co-Founder and CTO of Trillium Technologies, said: "These days it's not that difficult to find a shop that will 3D print something for you. However, it's tough to beat the level of professionalism, expertise, and attention to detail that we get when we work with Ogle which is why they were our first choice for the 3D printed ClearVue glass used in Space Glass."

The prototype was tested in micro gravity at the ZARM Drop Tower, Bremen, Germany – and is ready for its first flight. It might be years, decades or centuries before Ballantine's Space Glass can be enjoyed beyond the earth's atmosphere, however, the company have recreated the experience by crafting a special range of whisky for space, that can be enjoyed on earth.