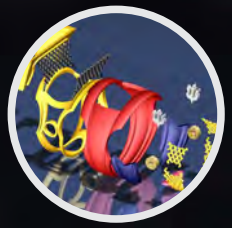
From concept to perfection.

Detailing the efficient workflow of the CAD / CAM & CASTING processes incorporating, 3Design, Zbrush, Asiga PICO2 and SuperWAX direct casting material.



CUSTOM CAD4YOU

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Jörg Scheffel

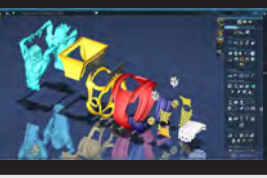
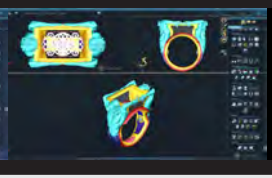
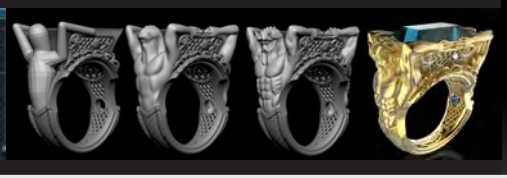
ASIGA

3DESIGN SOFTWARE SOLUTION

ZBRUSH

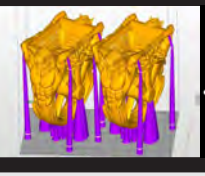
The CAD Design

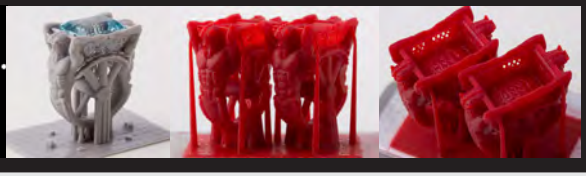
Achieving geometry with such complexity required a combination of CAD design packages. Pixologic ZBrush was selected for the surface modelling and 3Design for the construction and detailing of the individual parts. The outcome combines a beautifully organic form with the necessary design detailing for stone setting and finish.


The 3D Print

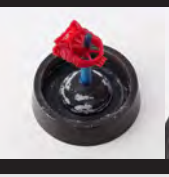
To achieve the high level of detail and resolution the Asiga PICO2 was chosen to 3D print the design. A sample was first printed in Asiga PlasGRAY to verify the design and then subsequently printed in Asiga SuperWAX for direct investment casting. The sprue network was modelled in CAD to ensure a clean sprue position for efficient metal flow in casting.

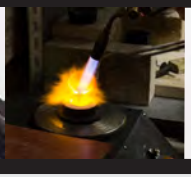


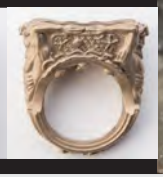



The Casting

By designing the sprue network in CAD ensured a clean transition from the Asiga PICO2 to the casting tree. Asiga SuperWAX was invested in a gypsum bonded investment and cast on a vacuum casting machine. The following burnout process was used: 1.5 hours to 139°C, 1.5 hours to 349°C, 1.5 hours to 740°C, drop to 550°C and pour.








The Result

Sascha Vogt from CustomCAD4You explains *"Based on the impressive detailing of the Poseidon ring, each step of the process including the creation of the 3D model, generation of supports in Asiga Composer software, printing the parts on the PICO2 and then handling SuperWAX before, during and after the casting process demonstrated the seamless jewelry manufacturing solution from Asiga."*