ABOUT ORIARTIS

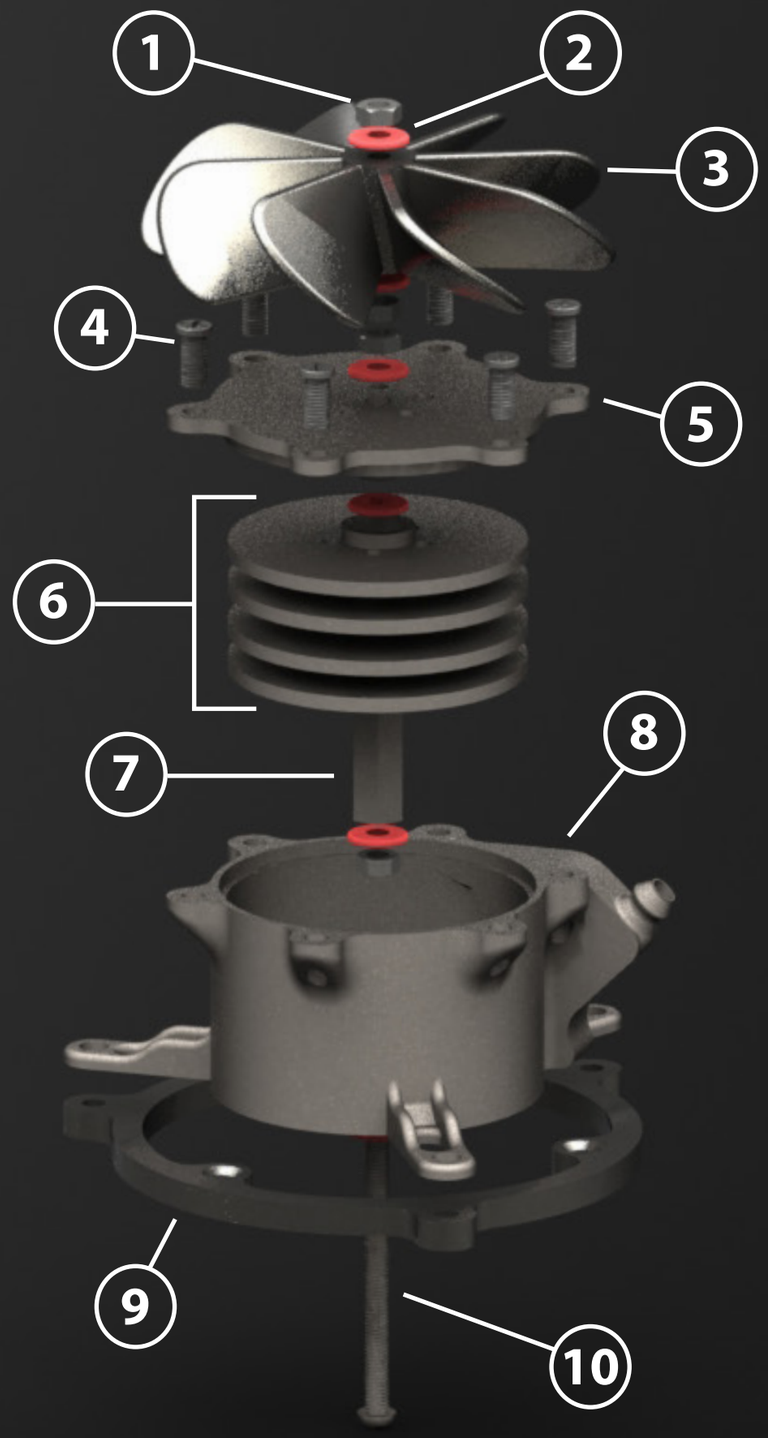
WHO WE ARE AND OUR ETHOS

Based in Brighton UK, Oriartis conceive and build extraordinary design and engineering concepts. Embracing the latest CAD and 3D manufacturing technologies, in conjunction with our industry partners we bring unique designs to life. Our team of highly capable business professionals and university placement students focus on design excellence. Current innovations include the design of a completely new racing drone main power unit capable of winning the drone speed record. The B1 motor (shown below) will be 3D printed and powered by our V-T technology.

THE TESLA TURBINE

THE CORE OF THE B1 V-T

The Tesla turbine works on the boundary layer effect. When an energy source (such as compressed air) is introduced into the turbine, a vortex is created and the disks rapidly accelerate. This is an integrated and elegant piece of engineering that has been successfully designed and 3D printed by our placement students. Many challenges had to be overcome to produce this model which we can now offer as a learning experience for students on this course.



ABOUT THE COURSE

This course is designed to enable you to become a better product designer and engineer. You will learn a new skill each week culminating in building a Tesla turbine of your own design, competing against others to win the top prize. At course completion you will have a working 3D model for placement interviews, a rendered view for your portfolio and a certificate of attendance.

COURSE LAYOUT

A BREAK DOWN OF THE WEEKLY DESIGN TASKS (2 HRS PER LESSON)

Week 1: Learn the basics of CAD, engineering concepts, tolerancing, and produce your first components. Start to design the main housing. Use advanced Solidworks tools and overcome engineering challenges.

Week 2: Finish and print additional parts. Begin to include components for precision fit.

Week 3: Introduction to more advanced Solidworks features, such as evaluation tools and use of complex assemblies.

Week 4: Design refinement with further CAD advanced features to optimise component design. Assemble components, optimise material usage and finish your tesla turbine.

Week 5: Design your own propeller using the skills you have learnt and finish your assembly. Before the competition, optimise your design and use the available print services.

Week 6: Compete for the top prize, project debriefing and discuss how you can use these skills for future projects.

PARTS LIST

1	M3 Nut
2	M3 Washer
3	Propellor
4	Self Tapping Screw
5	Turbine Top Housing
6	Vortex Disk
7	Vortex Disk Axel
8	Turbine Main Housing
9	Standard Base
10	M3 Bolt (Axel)

COMPETITION

WIN ORIARTIS 3D PRINTING VOUCHERS

1st Place : £30
2nd Place : £15
3rd Place : £10

Each student can enter the design competition and compete to win. Designs will be fitted to a standard base and thrust-tested. In the event of a tie-breaker, the design using the least material and print time wins.

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