



Flow² is the computational fluid dynamic (CFD) module of AzureProject it enables sail designers to design and produce fast sails. Upwind sail configurations can be simulated in the desired sailing and trim conditions. By examining the sail forces generated by the proposed sail designs, sail designers can optimise mould shape and trim.

The Method

Flow² provides precise Aerodynamic analysis, taking into account the 3D effects associated with the characteristics of the designed shape, the presence of the deck, the mutual influence of genoa and mainsail, the influence of the sail-wake and also the wind twist, making it the surest way to achieve optimal sail performance.

How it works

**Step 1
Design**



Using the design features of AzureProject or AzureDesign, you can design:

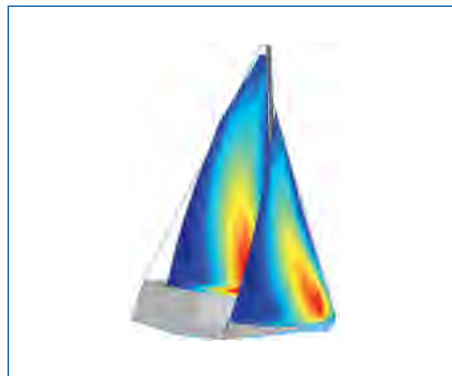
Hull and coach roof

Complete RIG

Mainsails & Genoas

Patches/Panel/UV Cover layout & development

**Step 2
RUN AERO Calculation**



You can input:

Apparent True Wind Speed (AWS)

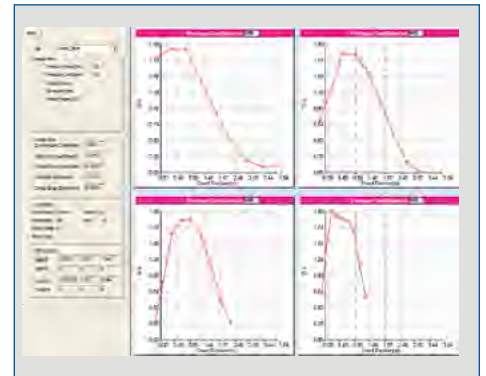
Apparent True Wind Angle (AWA)

Sailing course angles

Sails sheeting angles

Then you can start the aerodynamic calculation of DRIVE and SIDE forces and PRESSURE forces.

**Step 3
View Results**



Flow² produces many useful results:

Pressure due to wind distribution over the sail and on each sail section

Aerodynamic forces: Lift and Drag

Sailing forces: Drive and Side

All results are available in both graphical and numerical formats and can be saved and resumed at any time

“Using analysis tools you can produce faster, more efficient and accurate designs, saving both time and money, and analysing the performance of your sail.”

SANDY GOODALL, INDEPENDENT SAIL DESIGNER

Main benefits

Knowing the intensity and distribution of the wind force over the sail allows you to:

Change sail-shape geometry to obtain a higher DRIVE force

Discover in which sailing conditions sails go faster

Monitor SIDE force

Reinforce sailors' loyalty via the visualisation of the results of the aerodynamic analysis

Win competitive advantage thanks to the improved quality of the manufactured sail

System Requirements

Microsoft Windows® XP (SP2) or newer
Pentium® III (or equivalent) or newer
512MB minimum, 1GB recommended
3D Graphics accelerator recommended, which is OpenGL compatible (ATI or NVidia preferred).




ABOUT SMAR AZURE

UK-based and founded 10 years ago by Dr Sabrina Malpede and Dr Alessandro Rosiello, SMAR Azure has grown substantially over the years in terms of its team of dedicated professionals, yachting-specific technology and product portfolio. Our R&D team comprises three expert software developers and three specialists in CFD and FEM/FEA. Our products and services have been chosen by over 180 clients in 27 countries and across various segments of the yachting industry.

Contact us to find out more:

 sabrina@smar-azure.com

 +44 (0)131 610 7627

 www.smar-azure.com