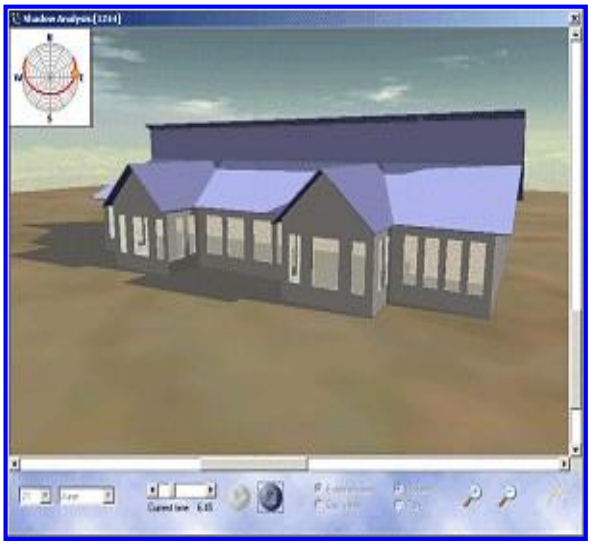
CHAM Product Update

Pioneering CFD Software for Education & Industry

HEVACOMP CFD MODULE for Building Services Applications

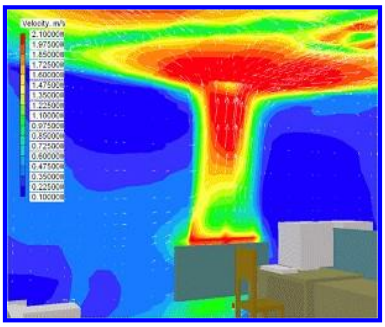
And the MIGRATION TO PHOENICS/FLAIR

HEVACOMP - CFD



Hevacomp (formed in 1981) is the firmly established UK market leader in building services design and CAD software. Hevacomp software is acknowledged as the industry standard, with over 2000 user sites – the largest user base of any developer in the building services field. In line with the company' s vision to bring Dynamic Thermal Simulation and CFD analysis within easy reach of every engineer, Hevacomp has joined forces with CHAM to link Hevacomp' s new Dynamic Thermal Simulation package to CHAM' s PHOENICS/FLAIR CFD solver.

The room geometry information, including the surface temperatures and convection coefficients, together with room objects like diffusers and heat sources, is created parametrically in Hevacomp' s new Simulation module. The complete input file is then passed to the CFD solver provided by CHAM. A key issue is the accurate modelling of diffusers and grilles. CHAM in co-operation with Hevacomp has implemented diffuser objects based on ASHRAE research.



The new Hevacomp Simulation package enables detailed heat gain simulations with detailed shadow analysis, heat loss simulations, summertime temperatures including mixed mode ventilation studies, overheating frequencies and extensive energy consumption and carbon calculations studies.

Prices start from £ 500 per year.

For further information, see Hevacomp Dynamic Simulation.

Features

Hevacomp incorporates a number of air distribution devices with manufacturers' data. It has an equipment library for localizing heat gains, as well as a furniture library. When a CFD module 'project file' is written by Hevacomp, all the boundary conditions are automatically set-up as a result of the Design Simulation (i.e. convection coefficients and surface temperature as well as the room surfaces geometry). The user does not have to set these manually.

The simulation engine for both PHOENICS/FLAIR and Hevacomp' s CFD module is the same. The pressure, velocity and temperature variables are solved and reported in the same manner.

Restrictions

Whilst the Hevacomp CFD module is a very fast and efficient process for producing the CFD input file, the shape and complexity of the room model is defined both the options solely available within Hevacomp' s CAD environment, as the PHOENICS/FLAIR (VR Editor) pre-processor is disabled in this version.

Similarly, Hevacomp' s CFD simulations solutions are currently limited to a single room. With PHOENICS/FLAIR any shape with any complexity can be setup, incorporating both internal and external environment data.

Migration to PHOENICS / FLAIR

For users with additional flow-modelling requirements, CHAM offers a natural progression from Hevacomp' s CFD module onto PHOENICS / FLAIR. Such requirements might include, but are not limited to:-

- Creating complex geometry, or importing from CAD;
- Problems involving external flow scenarios, wind profiling or pressure loading;
- Cases involving pollution, fire hazard, radiation, smoke, or sprinklers; Extended HVAC studies, or ISO-standard comfort indices; etc.

Hevacomp customers purchase PHOENICS/FLAIR under preferential terms!

A full description of PHOENICS / FLAIR can be found by clicking on: Flair brochure.

Email: info@arcofluid.fr
Web: http://www.arcofluid.fr