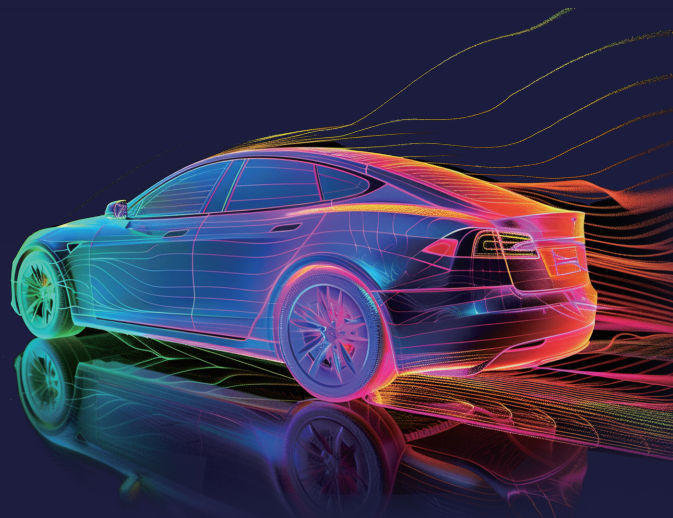


PHOENICS

Your Gateway to CFD Success



What is PHOENICS?

PHOENICS is a general-purpose Computational Fluid Dynamics (CFD) software developed by CHAM. Since its first release in 1981, it has been a reliable CFD tool with worldwide real cases in decades—reliable, proven, and continuously evolving to meet practical engineering needs.

By modelling the flow of fluids and heat transfers, it can reveal the regulation of fluid and thermal problems in a visualized way.

- Predict and visualize fluid flow and heat transfer
- Simulate smoke, gas dispersion, and environmental impacts
- Optimize performance, safety, and efficiency

What Can PHOENICS Do – Industry Applications

AEC

**Architecture, Urban
Planning, Civil Engineering**

- **Indoor HVAC:** Design of air conditioning, ventilation, and fresh air systems for buildings; cleanroom analysis for hospitals.
- **Outdoor Wind Environment:** Simulations of urban heat island effects, pedestrian comfort, and microclimate studies.
- **Fire Safety:** Fire risk assessment and fire spread simulations.

MFG

**Consumer & Precision
Electronics, General Machinery**

- **Electronics Cooling:** Thermal design at both system level (chassis, cabinets) and environmental level (data centers).
- **Equipment Heat Effects:** Analysis of temperature rise in equipment such as transformers and its impacts.
- **Combustion Challenges:** Modeling of internal reactions in boilers and similar systems.

EDU

Education & Academia

- Research and Experiments: Academic studies and validation of new concepts.
- Digital Teaching: Virtual experiments for classroom instruction.

Why Choose PHOENICS?

- **40+ years of CFD expertise** – trusted worldwide for accuracy and reliability
- **Intuitive interface & workflow** – fast setup and easy to learn
- **Seamless integration** – works with Rhino (RhinoCFD)
- **Specialized editions** – tailored versions for HVAC, buildings, fire safety, and more (e.g., FLAIR)

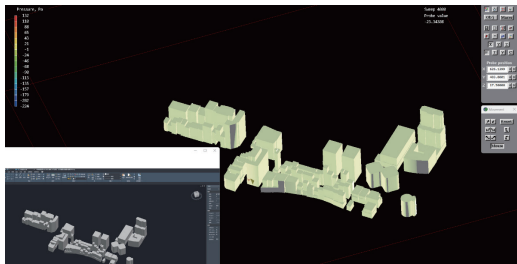
Trusted By Industry Leaders



PHOENICS 2025

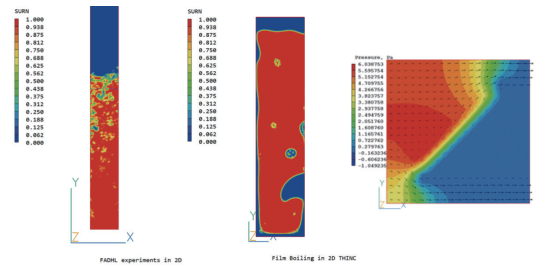
Pre-Processing Enhancements

- Improved CAD import pipeline with better geometry handling
- New interface for boundary condition setup and zone coloring
- Automatic surface detection, support for transparent solids
- Shadow visualization and shading adjustment for building models



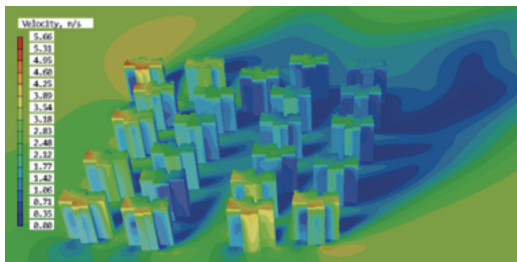
Solver & Physics Upgrades

- Added Spalart-Allmaras turbulence model for aero and HVAC
- Enhanced VOF: evaporation, condensation, and boiling physics
- Non-Newtonian fluid modeling (blood, polymer, slurries)
- Improved convergence control, residual tracking, and grid stability



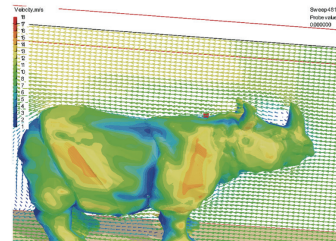
Post-Processing Improvements

- Logarithmic smoke contour plots for clearer visibility
- Enhanced scalar and vector field rendering
- Faster 3D visualization and integrated charting
- Exportable high-quality animations and snapshots



Extended Capabilities

- Full compatibility with Rhino 8 via RhinoCFD plug-in update
- FLAIR-specific metrics: PET (thermal comfort), TSI (air quality)
- Support for batch processing and automated report generation



Ready to Experience PHOENICS?

- Request a trial license or academic access
- Schedule a consultation with our technical experts
- Explore detailed case studies and success stories



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