



**AUTONOMOUS
HVAC CFD**



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There are a number of software tools that can help the design community; many programs are too costly, limited in scope, too complicated and/or clunky.

What is needed are tools that are accessible to all and easy to use with outcomes that are useful in influencing projects at the design stage. For a more thorough and dynamic understanding of environmental ergonomics, I have recently discovered the Autonomous HVAC CFD tool.

The app converts the building model to a 'CFD computational model' and facilitates variable placement of occupants, furnishings and HVAC types for predicting compliance with ASHRAE Standard 55. It also does 3D cross-sectional thermal and airflow analysis. Several other outputs help evaluate design options influencing thermal comfort and air quality, enabling an energy-efficient HVAC system.

I look forward to introducing this tool to students and practitioners as they solve many of the IEQ problems in buildings.

AI Powered Building Simulation Platform



Pay-per-use

Free Trial
5,000 credits

**Engineering
Simulation**
100 sq.ft/ \$

**Scientific
Simulation**
10 sq.ft/ \$



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BIM Interoperability

Facilitate better collaboration between architect and engineering design teams with our advanced BIM integrations and interoperability solutions. Seamlessly import building designs from Revit using data exchange through ACC, work effortlessly with DWG and PDF.

Envelope Design

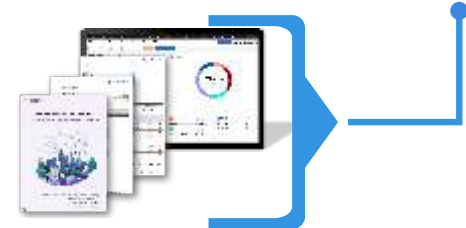
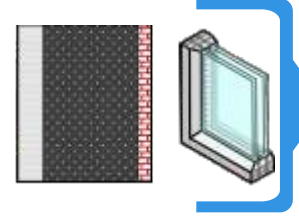
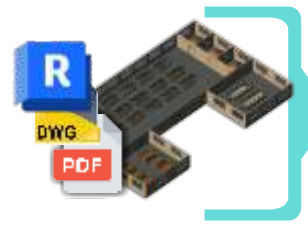
Access an extensive library of construction assemblies and explore material properties for walls, roofs, floors, and windows. Select the right U-values, Shading Coefficients, and more to create energy-efficient building envelopes that adhere to ASHRAE 90.1 standard.

HVAC Systems Modeling

Explore a range of pre-configured HVAC systems and optional ERV, HRV, CO2 & Occupancy-based DCV, etc... Create fully custom systems with drag & drop placement of equipment, controls, and airflow paths.

Load Calculation

Perform all sizing calculations for mechanical systems. Calculate peak heating & cooling load and generate compliance reporting for ASHRAE 183.



Thermal Comfort CFD

Harness the power of CFD simulation to analyze indoor airflow dynamics, optimize humidity control and thermal gradients map. Say goodbye to hot and cold pockets in the space as you achieve superior occupant thermal comfort.

Energy Efficiency Analysis

Gain insights into your building's annual energy profile and conduct in-depth evaluations of proposed and baseline Energy Use Intensity (EUI). Implement low-impact energy systems and strategies for sustainable designs. Use capital and running cost analysis to support informed decision-making.

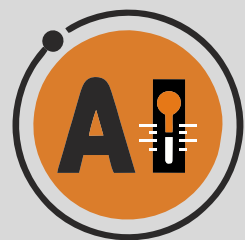
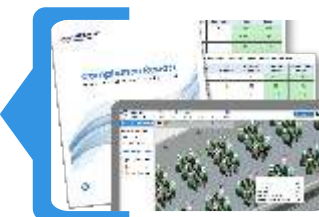
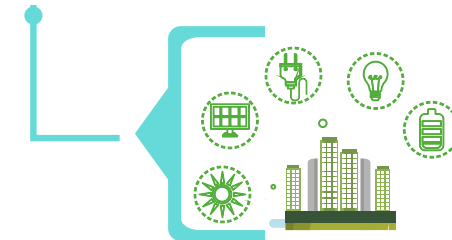
Code Compliance

Ensure compliance with energy codes, both Performance and Prescriptive, as outlined in ASHRAE 90.1. Seamlessly meet ventilation requirements specified in ASHRAE 62.1 and optimize thermal comfort in line with ASHRAE 55 standards.

Building Performance Reporting

Create building performance reports tailored to streamline and support the LEED V4.1 certification process. Easy to use tools for annual 2030 DDx project reporting. Gain insights into the environmental impact of your building materials through Life Cycle Assessment (LCA).

AUTONOMOUS HVAC CFD



Comfort AI

Early insights with AI

With the new AI feature Comfort AI, you can get efficient occupant thermal comfort checks, accelerating design optimization iterations.

- Get Upfront Thermal comfort insights.
- Faster results for exploration
- Fine-tune HVAC designs to ensure optimal thermal comfort.

Simulate Large Infrastructure HVAC Design

- Airport
- Stadium
- Public Spaces
- Auditorium etc

