MECHANICAL MODELLING 3D
Design • Drafting • Modeling

Phone: +91-794-000-3252
Email: info@mechanical3dmodelling.com

Hi-Tech House, B/H V-Murti Complex,
Near Gurukul Tower, Gurukul,
Ahmedabad-380 052, Gujarat, INDIA

CFD helps to predict the flow behaviour inside building HVAC application

Customer Profile

- The customer is specialized in building design, engineering and installation of HVAC systems.
- The customer is leading BIM company working with various clients across Asia-Pacific region.

Technology Used

- ANSYS FLUENT v14.0

Challenges

Business/Industry Challenge

- HVAC system designer must give confidence to architects, building designer and owner that the ventilation system will perform as required.
- Based on the building design and requirements, air flow and temperature should be mention at human comfort level
- It is important to optimize the HVAC system requirement by maintaining the human comfort.

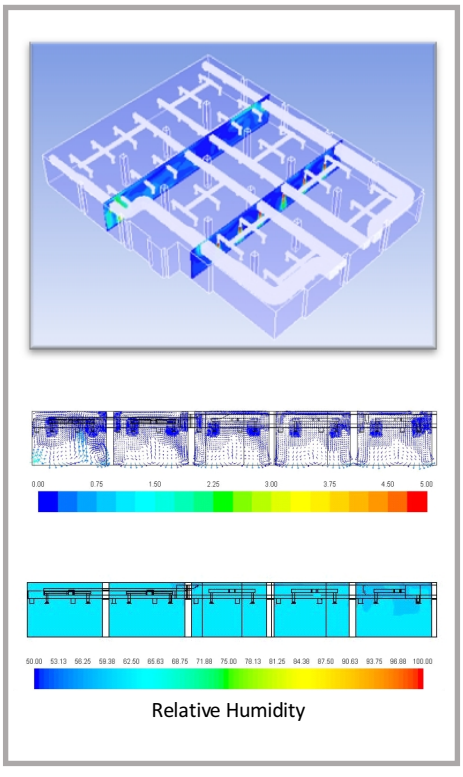
Engineering Solution

- ANSYS DesignModeler tool helps in creating 3D CAD model of building and HVAC duct system.
- ANSYS FLUENT is used to simulate and analyze human comfort inside the building.
- Determine the velocity, temperature and relative humidity (RH) profile inside building domain using CFD simulation.

Benefits

- Client was ensured that installation of HVAC system would allow them to mention temperature and RH at human comfort level.
- Using CFD simulation, the HVAC industry can perform testing and study design changes in virtual environment.
- Design correction can be analyzed to ensure the requirements, prior to installation of HVAC system for value addition to the work.

Use of ANSYS FLUENT v14.0 has helped us to shorten the design cycle substantially both in terms of time, product delivery and cost.



About Mechanical 3D Modelling

Mechanical 3D Modelling is an India based company that caters for global clientele and plans to penetrate deeper into the existing and emerging markets. Proficiency lies in offering qualitative, cost effective and time bound mechanical engineering design services, including 2D, 3D CAD drafting, 3D solid modeling, FEA, CFD, rapid prototyping, reverse engineering. Professional and highly experienced team can handle all kind of CAD projects with the use of AutoCAD, Wildfire, 3D Max, Inventor, Solid Works, Solid-edges and Pro-e tools.