



Niharika Computational Engineering
Solutions Pvt Ltd

HVAC Industry Vertical

Overview, Services and Key Projects





Overview:

Computational fluid dynamics (CFD) analysis allows the HVAC designer to completely visualize the fluid velocity, density, temperature, turbulence, pressure field, the chemical concentration of pollutants, and smoke in the planning stage itself.

Our precise CFD analysis results enabled the HVAC contractors to identify crucial problems, explore multiple design options, and make conscious engineering decisions to achieve sustainability, operational excellence, optimal utilization of resources, and to comply with safety standards.

Computational Fluid Dynamics (CFD) analysis solutions to address Ventilation, fire propagation, and smoke extraction in basement parking zones, underground tunnels, airports, and other public Infrastructure are our niche service offerings that enable our customers to make conscious engineering decisions to achieve sustainability, operational excellence, optimal utilization of resources and to comply with safety standards.



Services:

Computational Fluid Dynamics analysis

- Thermal Comfort CFD Analysis
- Fire propagation studies using CFD analysis software
- Smoke and Evacuation Modelling
- Acoustic Modelling
- Flue dispersion Modelling
- HVAC CFD analysis
- CFD analysis to estimate pressure losses
- Fan performance assessment and Fan selection leveraging CFD analysis capabilities
- Generator, UPS, and DRUPS Room Analysis
- Hot and Cold Aisle Arrangement

Mechanical design

- Reverse Engineering
- Concept Design
- Sheet Metal Design
- Chamber design
- CAD Migration
- Creo Services
- UG-NX Services
- 2D to 3D Conversion, 2D to 3D Modeling
- Vector to Raster



List of Key Projects: CFD analysis

SL No	Project title	Customer/ End user
1	CFD analysis for underground transport tunnel: Al Shamiya Expansion Project, Makkah, Saudi Arabia	Saudi Binladin Group
2	CFD analysis for Boubyan bank data center, Kuwait	Midis group, Kuwait
3	CFD analysis for General Electric data center, Bihar, India	Shapoorji and Pallonji EPC, India
4	CFD analysis of large data center for Shapoorji and Pallonji EPC, India	Shapoorji and Pallonji EPC, India
5	CFD analysis for Satellite handling clean room, Indian Space Research Organization, India	Shapoorji and Pallonji EPC, India
6	Air flow and acoustic analysis for Mahindra wind chimes high rise residential tower, block 1, Bangalore	Mahindra Life Spaces, India
7	Airflow and acoustic analysis for Mahindra wind chimes high-rise residential tower, block 2, Bangalore	Mahindra Life Spaces, India
8	CFD analysis to assess the proposed HVAC design: Department of Finance, Government of India, Kerala	Government of India
9	CFD analysis to evaluate the proposed HVAC design: Satellite Integration clean room, Indian Space Research Organization, India	Indian Space Research Organization (ISRO)
10	CFD analysis to study flow development in LM Wind power blade moulding factory, India	LM Wind Power- India
11	CFD analysis of vaccine storage warehouse, Agility Logistics, Dubai	Agility Logistics, Dubai



Contact us

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