

Ali El Halabi

Beirut, Lebanon | +961 70 111978 | ame978@hotmail.com | [LinkedIn](#)

Professional Summary

Mechanical Design Engineer skilled in HVAC, plumbing, and firefighting system design across diverse international projects. Expert in BIM coordination, load calculations, and sustainable solutions aligned with ASHRAE and LEED standards. Proven record of accomplishment optimizing designs to reduce costs, improve energy efficiency, and enhance project delivery in complex multidisciplinary environments.

Core Competencies

- HVAC & Mechanical Systems Design
- Building Information Modeling (BIM)
- Energy Efficiency and Calculations
- Technical Documentation and Drawings
- Multidisciplinary Collaboration Quality
- Technical Documentation Preparation

Experience

EMDC Group

Mechanical Design Engineer | June 2024 – Present

- Design HVAC, plumbing, and firefighting systems across Red Sea villas, hospitals, hotels, airports, and residential buildings in Saudi Arabia, Egypt, Iraq, Qatar, and UAE
- Produce coordinated BIM models using Revit, AutoCAD, Navisworks, and HAP, minimizing clashes and delays while supporting LOD 350–500 across all project stages
- Prepare BOQs, shop drawings, and design packages aligned with ASHRAE, NFPA, IPC standards, ensuring compliance, sustainability, and efficiency through optimized equipment selection
- Collaborate in a 10-member team including seniors, peers, and interns, reviewing and validating every project stage for technical accuracy and quality control
- Apply LEED principles to reduce energy consumption and costs through proper system sizing and equipment selection, enhancing execution speed and environmental performance

Mechanical Systems Designer - Freelance | Jan 2024 – Present

- Design HVAC, plumbing, and firefighting systems for U.S. residential, office, and villa projects, delivering complete designs, BOQs, and accurate as-built documentation
- Optimize HVAC layouts in Revit to resolve trade clashes, reduce on-site rework, cut installation time by 20%, and minimize client costs
- Perform precise heating and cooling load calculations to ensure efficient system sizing, enhancing energy performance across multi-floor residential and commercial buildings
- Prepare and coordinate shop drawings using Revit MEP and AutoCAD, ensuring alignment with all disciplines and compliance with U.S. project requirements

Reef-Kinetics

Mechatronics Engineer Intern | April 2024 – June 2024

- Contributed to designing, programming, and mechanically assembling an automated water testing robot, integrating sensors and electronics for real-time data via mobile and web apps
- Modeled and fabricated parts with SolidWorks and 3D printing, ensuring precise calibration

Khatib & Alami

Design Engineer Intern | June 2023 – Sep 2023

- Assisted full-set HVAC design for an office in Saudi Arabia and a hospital in Qatar, working with VRF, split units, and chilled water systems
- Performed load calculations, duct sizing, and plumbing layout while enhancing Revit MEP, AutoCAD, and ANSYS CFD skills collaborating with senior engineers

Education

Beirut Arab University

- Bachelor of Engineering – Mechanical Engineering | 2024

Certificates

- Completed trainee program at Fibra Plast S.A.R.L, optimizing production, improving mechanical processes, performing maintenance, and ensuring safety compliance

Technical Skills

- Microsoft Office
- RMP
- Revit
- AutoCAD
- 3D Civil
- CFD simulation (ANSYS)
- NavisWork
- SolidWorks & MATLAB
- LEED
- Autofluid

Languages

- Arabic, Native
- English, Full Proficiency
- French, Full Proficiency