Bahaa Mohamed Sarhan

Mechanical Engineer

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🏴 Military service: Completed

CAREER OBJECTIVE

A dedicated **Mechanical Engineer (MEP) with + 3 years of experience** specializing in designing, installing, and maintaining mechanical, and plumbing systems. Experienced in HVAC systems, fire protection, plumbing, and energy-efficient solutions for residential, commercial, and industrial projects. Adept at coordinating multidisciplinary teams, reviewing technical drawings, and ensuring compliance with industry standards and safety protocols. experience automated machinery, smart HVAC systems, and building management systems (BMS).

EDUCATION

Higher Technological Institute (HTI), 10th of Ramadan city, Egypt   **(** 2017 – 2022 **)**
   Bachelor's degree in mechanical engineering with GPA: 2.97 (Very Good grades)
Graduation project:
   HVAC, Fire Fighting and Plumbing systems for a hospital (Excellent grades)

PROFESSIONAL EXPERIENCE

Mechanical Technical Office Engineer at Influence of modern architecture.   Egypt | Dec ,2024 – Present

- Making Design drawing and Shop drawing for (HVAC, Fire Fighting, and Plumbing).
- Preparing Calculations for Building loads, Calculating air flow and balance operation.
- Making Ductwork, Chilled Water pipes and pump head calculations.
- Select and Scheduling HVAC equipment.
- Designing fire sprinkler System and making hydraulic calculations.
- Calculating pipe size for Supply, Drainage and vent systems.
- Study the aspects, BOQ (bill of quantities) and drawings.
- Submission of clash detection issues to monitor the coordination of the model, asset engineers to resolve problem.
- Modelling and coordinate all MEP disciplines, using different BIM Software, with different LOD (300, 350, 400,500).
- Creating Revit Families as per material submittal and Revit templates for all disciplines.

Design HVAC Engineer at COSMOS-E Engineers & Consultants   Egypt | April, 2024 – Dec, 2024

Design HVAC System (Chilled Water System – DX. System)

- Developed HVAC designs for a variety of commercial, residential, and industrial projects.
- Conducted energy modeling other analyses to ensure optimal performance of HVAC Systems.
- Created drawings, diagrams, specifications, and construction documents for HVAC Systems.
- Preparation of Technical Specifications and Bill of Quantities.

Mechanical engineer – Engineering Entrepreneurship & Consulting Co.   Egypt | Jan 2024– Apri,2024

- Designing HVAC, Firefighting & Plumping Systems.

Bachelor's degree graduation Project   hospital Project | Egypt | 2022

Perform project shop drawings as well as coordination drawings between different disciplines for Damanhur hospital.

- HVAC team leader member for the medical care building and designed the chiller room.
- Relied on ASHRAE-170 which specialized in medical care building.
- Prepared the cooling loads report by using HAP Carrier software.
- Perform HVAC system components selection from different manufacturer Catalogues.
- Design and sizing ducts and chilled piping systems
- Accomplished academic grade: A+

PROJECTS

- **Central Kitchen – AL ZAHIR Palace Jeddah, Saudi Arabia.**
  Central Kitchen is in Saudi Arabia With approximate land area 1065 m^2 and consists of Two floors.
- **Commercial Mall, Riyadh, Saudi Arabia.**
  Commercial Mall is in Saudi Arabia With approximate land area 26125 m^2 and consists of Three floors.
- **King Abdulllah Logistics, Manufacturing and Technology Center (LMT)**
  LMT project is in NEOM City in Saudi Arabia which Consists of Three Building (WareHouse 60000m^2 , Factory 30000m^2 and Lab 20000m^2)
- **SAL Jeddah Airport, Saudi Arabia.**
  Sal Jeddah project is in Saudi Arabia with approximate land area 28500 m^2 and consists of three floors.
- **MAFI For Agricultural produce industries.**
  MAFI Project is in El Sadat City, Egypt with approximate land area 25600 m^2 and consists of Two floors.
- **Concentrate Factory Mostakbal Misr.**
  Concentrate Factory project in Sphinx City with approximate land area 135000 m^2 and consists of Two floors.
- **REFRIGERATORS Factory (El Araby) , Egypt.**
  Refrigerators Factory is a Project in Queisna, Egypt with approximate land area 900 m^2 and consists of 10 floors.
- **Hospital (HVAC Team Leader of bachelor's degree Project) (Excellent Grade)**
  Damanhur Hospital is in Beheira, Egypt with approximate land area 75000 m^2 and consists of 2 floors.
- **Sal Dammam Airport , Saudi Arabia Shop Drawing .**
- **UM EL QASR Building, IRAQ Detail Design.**
- **Caffefour Supeco Abbasya, Egypt.**

SKILLS

Technical skills

- HVAC Systems Design Review and Analysis
- Fire Fighting Protection Systems
- Project Coordination
- Quantity Surveying & Material Procurement
- Smart HVAC & Building Management Systems (BMS)
- Quality Control (QC) & Quality Assurance (QA)
- BOQ Studying & Shop Drawings
- Preparing and submitting Technical Reports.

- Systems Design review
- Automation of construction machinery
- Material Selection & Specification
- Building Codes & Standards

Computer skills
- Microsoft XP applications (Word, Excel, Office, PowerPoint, Outlook)

Language Skills
- Arabic – (Native Tongue)
- English – (Upper intermediate spoken and written)

Personal Competencies
- Ability to work in a fast-paced environment to set deadlines
- Highly organized with a creative flair for project work
- Enthusiastic self-starter who contributes well to the team.

CERTIFICATES & COURSES

MEP-BIM Diploma Kaitech Academy About 30 Courses in the diploma, Covering many topics such as:

- BIM Fundamentals Course.
- Revit Essential Course.
- Revit Advanced Course.
- Revit Coordination Course.
- BIM 360 Course.
- BIM Management Course.
- BIM Implementation Course.
- Dynamo Course.
- Coordination and Work sharing.
- Autodesk Construction Cloud.
- BIM Execution Plan.
- Information Modeling using ISO 19650.
- Fire Protection (Fire Fighting & Fire alarm).
- Hydraulic systems & Power Stations.
- XR Technologies (Virtual Reality & Augmented Reality) Course.

- Clash Detection, Navisworks Course
- Escape and Lumion Course
- Revit Work-sharing Course.
- BIM 4D, 5D, and 6D.
- Autodesk 6D Forma
- BIM 7D (Facility Management)
- Programming Fundamentals
- BIM Automation with Python