

Ahmed Samir Ibrahim El-Shamy

MECHANICAL BIM ENGINEER | MEP BIM COORDINATION

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PROFESSIONAL SUMMARY

Mechanical BIM Engineer with four years of experience delivering coordinated HVAC, firefighting, plumbing, and medical gas models for major projects in the UAE, Saudi Arabia, and Egypt. Skilled in Revit modelling, multidisciplinary clash resolution, shop drawings, RFIs, technical submittals, and as-built delivery. Familiar with Abu Dhabi authority requirements, Civil Defense coordination, Estidama, ISO 19650, COBie, and BIM workflows from LOD 300 to LOD 500.

CORE EXPERTISE

MEP BIM Modelling | HVAC | Firefighting | Plumbing | Medical Gas | Clash Detection | Shop Drawings | RFIs | Technical Submittals | As-Built Models | COBie | BIM Coordination | LOD 300-500 | Autodesk Construction Cloud

PROFESSIONAL EXPERIENCE

Prompt General Contracting

Mechanical BIM Engineer | Technical Office

Abu Dhabi, UAE

Nov 2025 - Present

- Develop and maintain coordinated HVAC, firefighting, and plumbing models in Revit based on approved IFC drawings and project requirements.
- Run multidisciplinary coordination and clash detection with architectural, structural, and electrical teams in Navisworks, resolving conflicts before construction.
- Prepare, review, and update mechanical shop drawings in line with approved submittals, coordination outcomes, and site conditions.
- Review subcontractor material submittals and technical documents for compliance with specifications and approved design requirements.
- Prepare RFIs, technical queries, consultant responses, equipment schedules, quantity inputs, and O&M and handover documentation.
- Support redesign and value engineering, and coordinate technical workflows with consultants, subcontractors, suppliers, and site teams.
- Apply Abu Dhabi requirements, including ADM, ADCD, Civil Defense, and Estidama considerations, to mechanical deliverables.

Egyptian Engineering Company

Mechanical BIM Engineer

Cairo, Egypt

Sep 2023 - Oct 2025

- Produced mechanical design and shop drawings for HVAC, firefighting, and plumbing systems.
- Developed Revit models from LOD 300 through LOD 500 and maintained coordinated project deliverables.
- Performed clash detection and resolution in Navisworks with other disciplines.

SWAT Company

Mechanical Technical Office Engineer

Cairo, Egypt

Nov 2022 - Aug 2023

- Prepared HVAC, firefighting, and plumbing design drawings for gyms, clinics, retail units, offices, and villas.
- Coordinated mechanical systems and supported site execution in accordance with project specifications and schedules.

SELECTED UAE PROJECTS

Liwa City Bus Station | *Al Dhafra, UAE* | *DMT* | *AED 41M* | *2025-2026*

- Develop and coordinate HVAC, plumbing, drainage, and firefighting models and drawings for the G+1 bus station complex, service and maintenance building, refuelling building, washing building, and associated external works.
- Prepare equipment layouts, coordinated shop drawings, mechanical details, RFIs, technical queries, and material submittal inputs in line with IFC drawings, approved materials, and site requirements.
- Coordinate mechanical services with architectural, structural, electrical, infrastructure, and site teams, and support O&M information, as-built records, and project handover documentation.

Mohammed Bin Zayed City Mosques | *Abu Dhabi, UAE* | *DMT* | *AED 31.5M*

- Upgraded the mechanical BIM model for three G+M mosque and accommodation buildings to LOD 500 for accurate as-built delivery.
- Managed multidisciplinary coordination and aligned the Revit models with approved drawings, site conditions, and final installed mechanical services.
- Applied project naming conventions and embedded COBie data to support asset information delivery and future facility management requirements.

REGIONAL BIM PROJECTS

King Fahd Sports City | *Riyadh, Saudi Arabia* | *Ministry of Sports* | *MACE*

- Prepared coordinated MEP shop drawings in Revit in accordance with approved IFC drawings, project specifications, and material submittals for the stadium redevelopment.
- Performed multidisciplinary coordination in Navisworks and identified clashes between HVAC, plumbing, electrical, structural, and architectural models.
- Updated BIM models and shop drawings following coordination meetings, consultant comments, clash resolutions, and approved material selections.

Jawharat Jeddah Mall | *Jeddah, Saudi Arabia* | *CENOMI* | *Shaker Consultancy Group*

- Modelled and coordinated HVAC, plumbing, drainage, and firefighting systems in Revit and prepared coordinated mechanical equipment layouts.
- Produced shop drawings, general arrangements, technical details, RFIs, and material submittal inputs, and created project-specific Revit families.
- Generated electromechanical clash reports and updated models and drawings based on coordination results, consultant comments, and approved submissions.

Al Badr Hospital | *Cairo, Egypt* | *Ministry of Health* | *Shaker Consultancy Group*

- Prepared HVAC, plumbing, drainage, and firefighting technical deliverables, including equipment layouts, coordinated shop drawings, schedules, and mechanical details.
- Coordinated the mechanical systems with other disciplines and prepared RFIs, technical clarifications, model updates, and drawing revisions until issue closure.

Damanhur Hospital | *Damanhur, Egypt* | *10 floors*

- Developed LOD 350 BIM models for HVAC, firefighting, plumbing, and medical gas systems across the 10-floor hospital building.
- Performed multidisciplinary clash detection and coordination to produce a clash-free model and coordinated mechanical shop drawings.
- Supported BOQ preparation, 4D time planning, 5D cost workflows, and augmented and virtual reality project outputs.

King Faisal Specialist Hospital and Research Centre | *Hospital mega project*

- Reviewed and verified plumbing and firefighting design information before developing the coordinated Revit models.
- Prepared general arrangements, coordinated layouts, mechanical shop drawings, and electromechanical clash reports.
- Resolved coordination issues with other disciplines and created project-specific Revit families required for model and drawing delivery.

ADDITIONAL DESIGN PROJECTS

Kaitech School | *BIM graduation project*

- Designed HVAC, plumbing, and water supply systems and developed coordinated Revit models based on the architectural and structural requirements.
- Prepared mechanical shop drawings, performed clash detection, and applied Dynamo, BIM 4D, 5D, 6D sustainability, and 7D facility management workflows.

KAK Squad Restaurant | *Commercial fit-out project*

- Designed HVAC, plumbing, and water supply systems for the restaurant and coordinated equipment and service layouts with the fit-out requirements.
- Produced detailed mechanical shop drawings, sections, and coordinated layouts for construction and site implementation.

Residential Villa Projects | *Multiple private villas*

- Designed HVAC, plumbing, and water supply systems and selected practical service routes based on architectural layouts and space requirements.
- Prepared shop drawings, coordinated plans, sections, and mechanical details, and resolved clashes with structural and electrical elements.

EDUCATION

Mansoura University
BSc in Mechanical Engineering

Egypt
Jul 2022

Overall grade: Good | Graduation project: Innovative solar water desalination system with thermal storage - Excellent

CERTIFICATIONS

Autodesk Authorized Academic Partner Certificate

- Credential: Mechanical BIM Diploma using Autodesk Revit 2024.
- Completed 101+ training hours through Kaitech, an Autodesk Authorized Academic Partner; issued 15 Apr 2026.
- Autodesk Certificate No. EM304574098758695806659.

Kaitech Academy Certificate of Completion

- Credential: Mechanical BIM Track covering BIM modelling, coordination, information management, automation, and multidimensional BIM workflows.
- Completed 300 online hours from Aug 2024 to Apr 2025 with a final score of 84.1%.
- Certificate ID R11-B-M-65771.

PROFESSIONAL COURSES

Mechanical BIM Diploma | Kaitech Academy | Aug 2024 - Apr 2025 | 300 hours

- BIM fundamentals and information management in accordance with ISO 19650.
- Revit Essential, Advanced, Worksharing, and Coordination.
- Navisworks coordination and clash detection, Autodesk Construction Cloud, and Dynamo.
- Enscape, extended reality technologies, BIM 4D, 5D, 6D sustainability, and 7D facility management.

MEP Diploma | ASEC | Dec 2024 - May 2025 | 160 hours

- AutoCAD with Autofluid and Revit for MEP drafting and modelling.
- HVAC, firefighting, and plumbing design and coordination.
- Application of relevant ASHRAE, NFPA, and SMACNA codes and standards.

TECHNICAL SKILLS

BIM and CAD	Revit, Navisworks Manage, AutoCAD, Revit Worksharing, BIM 360, Autodesk Construction Cloud
Automation and Visualisation	Dynamo, Enscape, augmented and virtual reality workflows
MEP Design	HAP, Elite, DuctSizer, ASHRAE Duct Fitting Database, HVAC, firefighting, plumbing, and medical gas coordination
Productivity	Microsoft Excel, Word, and PowerPoint

LANGUAGES

Arabic: Native | English: Excellent

PERSONAL INFORMATION

Nationality: Egyptian | Date of Birth: 17 July 1999 | Marital Status: Single | Military Service: Permanently Exempt