

KATECH PROFILE

MEP ENGINEERING AND SUSTAINABILITY SERVICES

 <p>HVAC</p> <p>We Happens to be amongst the leading providers of HVAC (Heating, Ventilation, & Air Conditioning) Design Services.</p>	 <p>Plumbing</p> <p>We deliver best Sewerage system and Water supply detail designing and drawing services you can ever need.</p>
 <p>Firefighting</p> <p>We Specialize In providing consultancy on fire system, include like designing, detailing or drafting.</p>	 <p>Electrical</p> <p>We provide accurate electrical drawings, include like designing, detailing or drafting.</p>
	

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MEP ENGINEERING AND SUSTAINABILITY SERVICES

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New Cairo, Egypt.

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MEP ENGINEERING AND SUSTAINABILITY SERVICES

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1-SERVICES:

KATECH can offer a wide range of services and skills to any project, from feasibility, concept designs and modelling through to project management and client representation.

As well as Building Services design, we are experts in renewable technology and energy efficiency that runs through every project we undertake.

- Electrical, Mechanical & Plumbing Services
- Sustainable Building Services
- Low Energy Design Appraisals
- Environmental & Alternative Energy Solutions
- Business Energy Efficiency Strategies
- Voltage Power Optimization Planning & Feasibility
- MEP Project Management
- MEP Infrastructure Concepts
- Building Control & Compliance Checks Report & Documentation
- Energy Use Profiling, Audits & Certificates
- Power Factor Correction Reviews
- Production of O & M Manuals
- Project Close out documents.

Building Services Design. Mechanical & Electrical (M&E / MEP) Consultancy

The bedrock of our business is designing building services. We provide detailed design of all aspects of building services. Building service design is a significant component of the construction supply chain and is critical for design decision-making, accurate documentation, performance and cost-estimating, construction planning, managing and operating the resulting building. Our team of MEP consultants and engineers are there to help every step of the way. We typically work as part of the wider project team, including architects, structural engineers, project managers and quantity surveyors.

Mechanical design services overview

- Heating, Ventilation and Air Conditioning (HVAC)
- Refrigeration
- Building automation
- Smoke extraction
- Drainage and waste
- Domestic water
- Process plant and water treatment

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Electrical design services overview

- Electrical Distribution and Earthing
- Small power
- Telecom and data
- Lighting design, lighting control and emergency lighting
- High Voltage (HV) systems
- Low Voltage (LV) systems
- Backup power solutions (Generators +UPS)
- Fire alarm system
- Security System



Complete MEP Design Solution

We have a comprehensive and specialized team to cater to all your needs.

Furthermore, we provide a wide range of advisory and consultancy services in Project Management Consultancy and a range of Electrical, Plumbing, Firefighting and HVAC services / design in various areas of construction.

We are focused on delivering high quality work within time and budgeted costs, as evident in the various accolades and repeat business.

Our areas of expertise include:

- Housing
- Commercial Projects
- Offices
- Infrastructure
- Data center

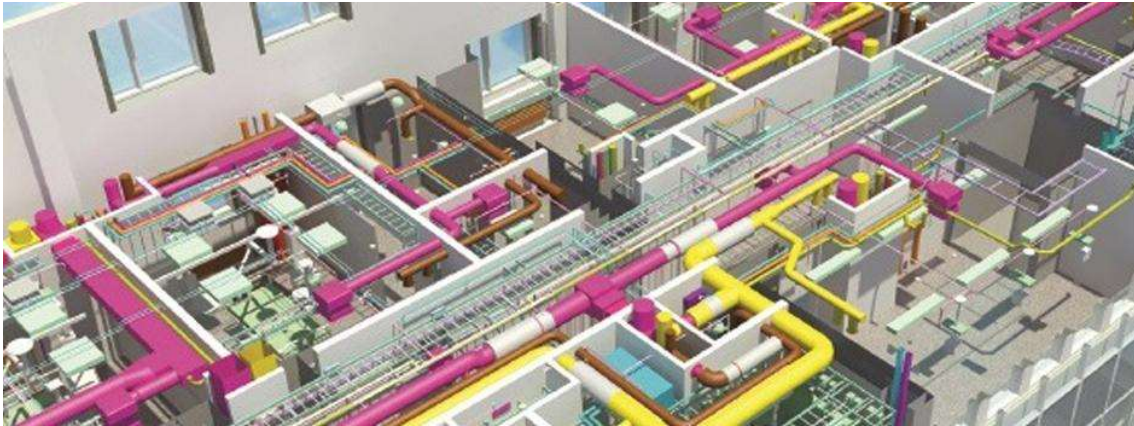
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- Retail
- Hospital
- Hotels and Leisure
- Public Sector
- Industrial / Factories



ENGINEERING DESIGN AND MEP COORDINATION SERVICES

Services are amongst the most crucial engineering services required by the Residential & Commercial projects. Keeping this in mind, we have developed high-quality capabilities in outsourced MEP design and drafting.

We offer superior quality, cost-effective and time-bound Mechanical, Electrical and Plumbing (MEP) engineering design & support services for MEP consultants, consulting firms as well as Design-Build consultants.

Our highly skilled modelers, engineers & expert team of coordinators, develop detailed design models, using coordination guidelines, constructability analysis & clash coordination rules during pre-construction phase, thus focusing on providing valuable information to describe the proposed project.

Our service offerings:

- Model visualization
- Electrical design services
- HVAC design, drafting, and modeling
- Shop drawings
- Fire protection

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Fire safety engineering services

KATECH fire safety engineering services include high level strategic advice using detailed engineering analysis, computer modelling and negotiating positive outcomes for our clients with approvals bodies. Our service includes expertise in relation to matters such as fire regulations, fire growth, fire dynamics, means of escape, smoke control, structural fire resistance, as well as in the detailed design and evaluation of fire safety products and systems, in compliance with NFPA and local fire regulation and requirements.

Industrial Fire Protection System Design

Fire Suppression, Detection, Alarms & Mass Notification Systems

KATECH providing industrial fire protection systems for our customers.

We are providing high value life safety protection systems for industrial buildings, applications and special hazards.

Our goal is to help maintain the productivity of our customers by keeping all life safety systems running properly and production systems working efficiently.

Our team of engineers and designers work with you to design a unique detection or industrial fire suppression system for your needs.

We have high end controls and user interfaces to manage systems and have integrated gas or smoke detection systems into our customer's every day production equipment to shut down systems to help prevent emergency situations.

We offer fire protection system design for manufacturing facilities, food processing, steel, and automotive and power generation industries.

We also offer detection and suppression systems design for automated process, robots, dip tanks, furnaces, hazardous materials, and flammable liquid and energy storage rooms.



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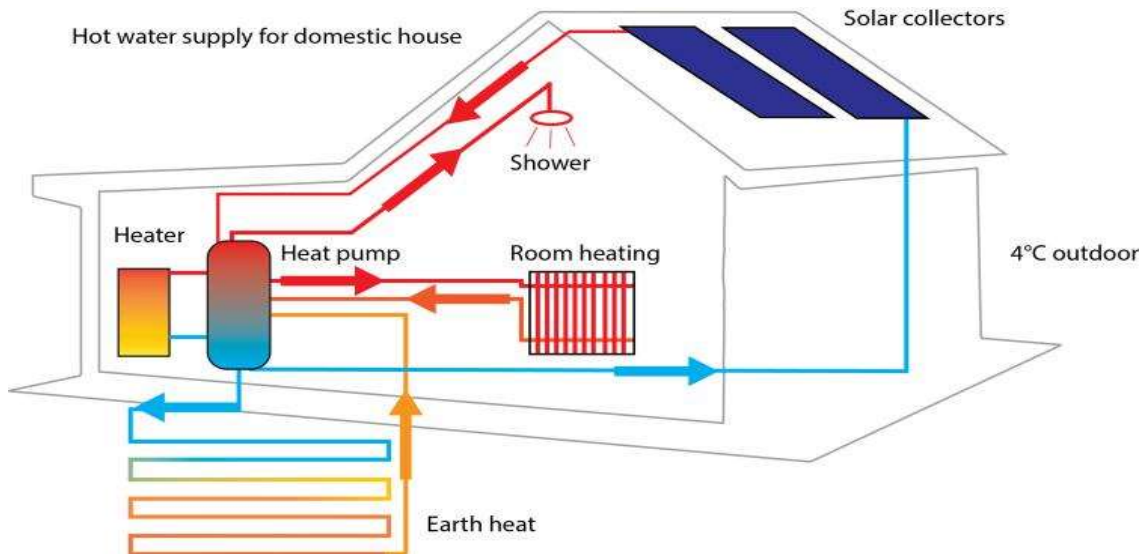
Analyses of Hot Water Supply for Domestic Houses:

Feasibility study of environmental friendly domestic house heating and hot water supply. Making use of solar collectors and earth heat to achieve more self-sustainable domestic living. Motivation of using LEM: This system results in a large set of model variables and dynamic system behavior. Total system optimization is not possible when using "classical" approaches such as hand or FEM/CFD calculations. Additionally, FEM/CFD models are time consuming and not all geometry data is available.

Approach and model:

When using lumped element analysis (LEM), only global specifications of the (sub) systems, such as thermal and fluidic interfaces, have to be taken into account. Using our extensive Simulink Thermal and Fluidic Library, we can easily model thermal and hydraulic systems. This results in detailed simulations of the total thermal & fluidic management of any system. Results: Using the results of these simulations, we can define an optimal system layout or pin-point specific aspects of the system which require special attention.

Results include a fast and modular model to optimize the subsystems and overall system.



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HVAC System Design Services

We have the expertise of working in projects of different sizes, applications and processes. We strive to give the end user the best value for money by providing optimal design with the proper balance of capital and operating costs, required redundancies, pragmatic and futuristic solutions.

Complete Heating, Ventilation & Air Conditioning (HVAC) System design for IT commercial buildings, Retail, Hotel, and Hospital buildings etc in compliance with ASHRAE / ECBC / NBC Standards.

Preparation of BOQ, Tender specifications and detailed AutoCAD HVAC design drawings that are good for Construction.

Critical HVAC System design for Data Center (Green Data Center Design) of any size and density, Clean Room Applications etc. in compliance with ASHRAE / ECBC/NBC Standards. Preparation of BOQ, Tender specification and detailed AutoCAD HVAC design drawings that are good for Construction

- Design of Chilled water systems, DX AC systems
- Design of AC systems for data centers, server farms
- Design of Forced ventilation systems
- Design of Smoke ventilation systems
- Design of Low side air distribution systems



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Specialist Electrical Design Consultancy

KATECH Consultants are specialist MEP consultancy, subsidiary our electrical design engineers are here to provide your development with a wide range of commercially viable electrical building services tailored to your individual needs.

Our Full Range of Electrical Design Services:

- Full electrical design works
- Electrical Performance Specifications and Scope of Works
- Mains and sub-mains power distribution
- Cable containment systems
- Small power & ancillary services
- Internal & external lighting systems
- Emergency lighting systems
- Specialist lighting design and control systems
- Lightning protection systems
- Data & communications Services
- Earthing and bonding requirements
- Standby generation & UPS systems
- HV & LV power supplies & distribution systems
- Renewable technology power requirements
- Power and controls wiring associated with mechanical services systems



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Electrical single Line Diagram Services

The Electrical single Line Diagram that we provide you can render enormous benefits. With a single easy to use interface you can design, examine and track all electrical equipments along with smartly doing away with the tiresome, manual, and erroneous conventional model. These diagrams clearly display system changes and scrutinize by simply clicking over the computer and the best part is that they are extremely interactive to model, administer, manage and execute the electrical network.

We provide following services in the diagram:

- Short-circuit calculation
- Coordination study
- Load flow analysis
- Safety evaluation
- Other engineering examinations
- Electrical safety procedures
- Efficient maintenance

We haven't restricted ourselves to the old methods and always long to create innovative solutions for you. For this, we strive to add on new features to make the diagrams more intelligent and drive them for better speed and precision. With this endeavor to provide you the latest and best, our team ensures that you receive the best of all results.



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MEP ENGINEERING AND SUSTAINABILITY SERVICES

IBMS AND ELV SYSTEM DESIGN

Complete Integrated Building management system design for all building applications.

This design comprising of operational sequencing, Controller units, Hard ware, selection of suitable software etc.

Preparation of BOQ, Tender specifications and detailed CAD IBMS design drawings that are good for construction.

Complete LV Systems design for all building application.

This design comprising of CCTV Network with Cameras/ Monitors/ NVRs using Optic Fiber, networks for large open areas, Access Control Systems with Biometrics, Attendance, Visitors management systems, Boom Barriers, Solar fencing Protection Systems, Public address system, background music system, SMATV system, Audio video system, IT and communication systems and Tenant services billing system.

Safety & Security System Design Services, We understand the safety concerns of the client and provide designs that address those needs from the perspective of privacy, safety, detection and monitoring.



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PLUMBING DESIGN SYSTEM SERVICES

Mechanical, electrical and plumbing (MEP) services are critical engineering services for any construction project. These are related to building design and construction and must be accurately planned to ensure that projects get completed as per specification, without obstacles. Our building information modeling (BIM) service allow architects, builders, engineers, and developers to gain better control over their projects and is set to become the standard operating procedure for construction projects around the world.

Of all the MEP trades, plumbing design is the only trade that is essential for life, providing clean drinking water and removal of wastewater from our buildings.

Our service offerings:

HW/CW domestic supply system

Sanitary-sewer drainage system

Storm water harvesting and irrigation system

Drainage waste fixture unit calculations

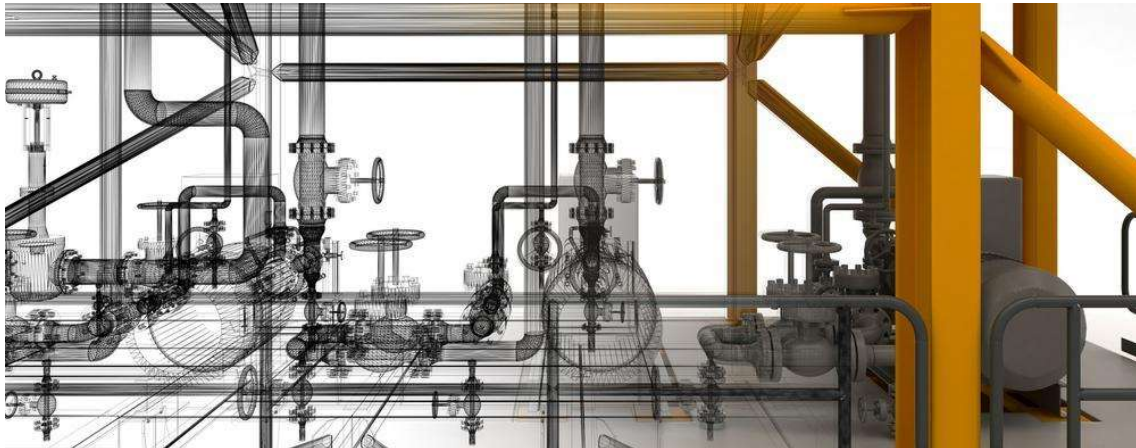
Water supply load and fixture calculations

Sizing and selection of PRV's, pumps, storage tanks, interceptors etc.

Hydronic / non-hydronic system design

Booster pump design and pressure loss calculation

Fabrication drawings for equipment and fitting accessories



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2- Experience and Part of Previous Projects:

2020 - 2021

- 1- MEP Design and Shop drawings services for SOLO Mall-New Cairo.
- 2- MEP and Infrastructure Design services for PHIA compound- IL Mount Glala.
- 3- MEP Design services for Water Villas compound- Dubai.
- 4- MEP Design services for AJLAN EXPRESS SERVICES – 12 Branch-KSA.
- 5- Design validation for Cargo Apron Extension-KKIA-Alriadh-KSA.
- 6- Telecom and Smart infrastructure network –Blue Vert compound–New Adm. Capital
- 7- ELEC. Design services for Avalon Office building - BUA 14000 Sqm.-New Adm. Capital
- 8- MEP Design services for Avalon Ex. Office building-BUA 17000 Sqm.-New Adm. Capital
- 9- Design services for CAPITALIA Office building - BUA 32000 Sq.m. .-New Adm.Capital
- 10- MEP Design services for Sports lagon – IL Mont Galala – Elsokhnh.
- 11- Design services for Palm valley Mall – 6th October city – BUA 18000 Sq.m.
- 12- Design for BMS system for Main Operation Center – Abu Dhabi.
- 13- Design for BMS system for AL REHAB MALL-8TH PHASE – CAIRO.
- 14- MEP Shop drawings services for West Qantara Hospital.
- 15- MEP Shop drawings services for East Qantara Hospital.
- 16- MEP Shop drawings services for International shooting center - CAIRO.
- 17- HVAC shop drawing and ESP for Pathology laboratory – Ain Shams University- CAIRO.
- 18- MEP Shop drawings services for EL KHANKA Hospital - CAIRO.

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MEP ENGINEERING AND SUSTAINABILITY SERVICES

- **KATECH TEAM:**

- 1 Eng. Khaled Abdo Mohamed – General manager – contact person – 32 years’ experience.
- 2 Eng. Ayman Imran – Head of Electrical section – 20 years’ experience.
- 3 Eng. Shereef Mohamed Amr – Head of Mechanical section - 15years’ experience.
- 4 Eng. Ahmed Mohamed – Sr. Mech. engineer, 12years’ experience.
- 4 Eng. Abdulah ibrahim – Mech. engineer
- 6 Eng. Ahmed Naser Mohamed –mech. engineer
- 7 Eng. Mohamed Fawzy – Elec. Engineer
- 8 Eng. Medhat Tallat – Elec. Engineer
- 9 Eng. Abd ELrahman khaled – IT manager
- 10 Mr. Ahmed Ismael – draughtsman
- 11 Mr. Omar Khaled - HR and Business development manager.

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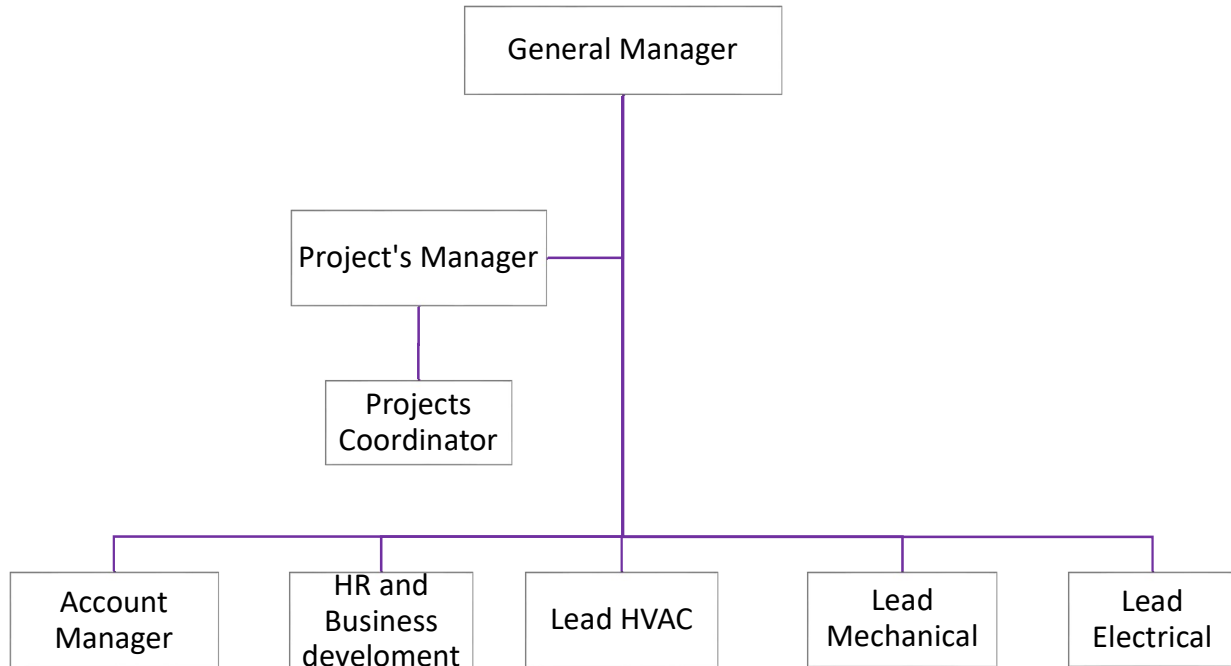
KHALED ABDO MOHAMED



General manager ,B.Sc , PMP

Khaled has 30 years of experience as Division manager / Project manager in design and execution of all MEP works inside and outside buildings and infrastructure network. Khaled has an intensive experience in technical study of projects, execution, preparing concept Base of design , detailed design drawings and tender documents.

4-ORGANIZATION CHART



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