



NAFFCO
FLOW CONTROL



MEP

PreFabrication
& Modular
System



*from design
to ready-to-install
system...*





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MEP MODULAR PROJECTS

Corporate Profile

A Complete Flow Control Solution Provider

- **MEP Pre-Fabrication & Modular System**
- **Piping Solution**
- **Smoke Management & Ventilation**
- **Valves Solution**
- **Passive Fire**

NAFFCO Flow Control provides a complete solution for construction projects, along with the customised system design and supply for the unique projects.

Since its inception, NAFFCO Flow Control has been continuously striving through its research and development to find out the ever changing needs of the market and cater to the same, with the help of its carefully selected vendors. The product portfolio offers a wide, unique & exclusive range of innovative, efficient and eco-friendly products.



Applus⁺



WRAS
Water Regulations Advisory Scheme

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“What’s measured improves!”

Corporate Profile



A Complete Flow Control Solution Provider

COMMITMENT

We are committed to provide the highest quality products and solutions therefore, we only supply globally recognised and approved products having UL, FM, Kitemark, LPCB, CE, WRAS, Applus certifications and more.

The product portfolio ranges from SHIELD's Steel & HDPE piping systems to the robust solution for the industrial ventilation, smoke management, valves,

QUALITY

passive fire and more. We always strive to better serve customers' needs by staying up-to-date with latest approved product range. Our strength relies on our quality products, services and delivery of right solutions to address your project requirements.

We supply Innovative, Efficient and Eco-friendly products in compliance with various American and European

REACH

standards. With representation in the Middle East and North Africa (MENA) region, we are capable to deliver our products and services in a short period of time. We simultaneously work on opportunities to explore new markets.

We believe in total customer satisfaction hence providing qualified and well-experienced support team.

As a member of NAFFCO Group, our success is driven by our "Passion to Protect"; our vision is to become the world's number one provider of innovative solutions in protecting life, environment and property.

Supplying State-of-The-Art Products to Ensure High Efficiency

MEP Pre-Fabrication

About the Pre-Fabrication

MEP Pre-Fabrication refers to the manufacturing of MEP service components for the building in an off-site environment away from the project which are transported & installed on site.

The practice of MEP Pre-Fabrication provides a feasible alternative to traditional methods wherein various MEP components can be manufactured, inspected, labelled and tested off-site during the whole process.



MEP Pre-Fabrication

Pre-Fabrication Key Benefits

The Features



Faster Completion
of Projects



Efficient Use
of Skilled Labor



Easy Installation



Less Hazardous
Environment



Less Onsite Traffic



Less Weather Delays



Cost Savings



Damage Prevention



Quality Control



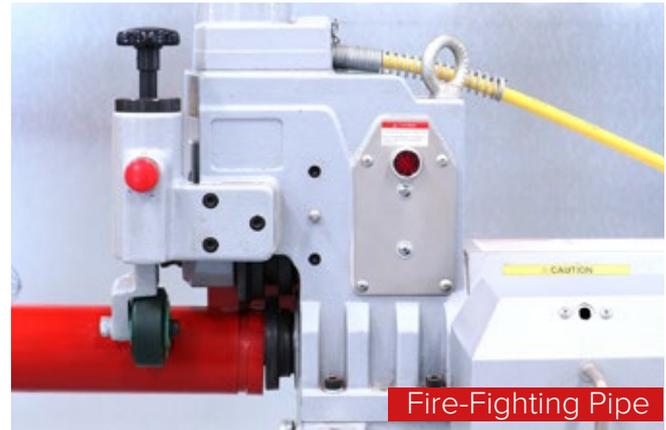
Reduced
Environmental Impact

MEP Pre-Fabrication

Activities involved in Pre-Fabrication

Types of Pre-Fabrication

1. Threading and Grooving



2. Welding

- **3G Welding Support Fabrication**

- G.I Angle Welding
- C Channel Welding
- I Beam Welding

- **6G Welding**

- Chilled Water Pipe Welding
- Fire-Fighting Pipe Welding
- Irrigation Pipe Welding

- **Butt-Fusion Welding**

- PPR Pipe Welding
- HDPE Pipe Welding



Activities involved in Pre-Fabrication

Types of Pre-Fabrication

3. Pre-Insulated Ducts

Pre-Insulated Duct System is made up of rigid closed cell poly-isocyanate board/rigid phenolic insulated panels faced by an aluminium foil on both sides. The Pre-Insulated Ductwork offers several advantages over GI Duct which includes:

- Light weight (only 15% of sheet metal ducting)
- Easy to handle
- Fast to fabricate & Easy to install
- Low thermal conductivity
- Clean air; fibre-free insulation core
- Top performance with very long durability



4. Support

- Duct Supports
- Pipe Supports
- Cable Tray Supports
- Chiller Supports, etc.

MEP Pre-Fabrication

Activities involved in Pre-Fabrication

Types of Pre-Fabrication

5. Assembly



Valve Assembly



Pipe Assembly



Water Meter Assembly



Pump Skid

MEP Pre-Fabrication



Advantages of Pre-Fabrication

Installation Comparison

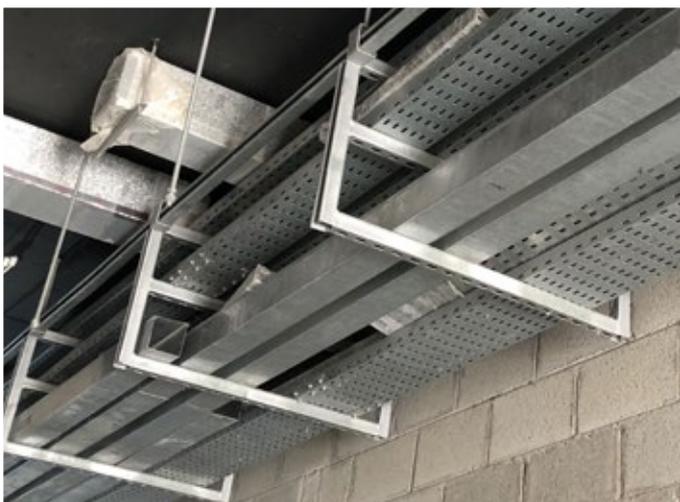
	PRE-FABRICATION	NORMAL SITE INSTALLATION
Sustainable Focus & Waste Reduction	Elimination of unnecessary material waste is made possible.	Normal site installation involves lot of material wastage thus increasing the project overall cost.
Accelerated Project Schedule	The manufacturing & assembly process begins offsite without waiting for the construction site to be ready.	Normal site installation requires access for work which is dependent on site clearance.
Cost Certainty	Since prefabrication components are produced and put together in a controlled environment, cost certainty is achieved.	Due to the substantial influence of several onsite & external circumstances, Reworks, etc., cost certainty cannot be attained to a fair extent.
Positive Impact of BIM & 3D Drawings	3D fabrication drawings are created using precise digital twins utilized on site which is then given to the factory for production, reducing the likelihood of errors, reworks, and material waste.	Use of 2D drawings which lack enough information increase the likelihood of errors, reworks and material waste on the installation site.
Enhanced Quality	Since work is done at floor level in a factory that is closely supervised, higher quality is attained.	As installation is done on scaffolding, ladders and in congested areas, it must be risky and of a lower standard.
Good Workmanship	Good workmanship is ensured by continuous monitoring of work by supervisor & also through CCTV's.	The heavy jobsite traffic makes constant monitoring impossible, thus workmanship cannot be guaranteed.
Safer Work Environment	Controlled factory-like, assembly line work environments result in more organized workspaces and fewer hazards.	Scaffolding and hoisting operations are required for every activities thus involving significant risks and dangers.

MEP Modular System

About Modular System

Pre-Fabricated MEP Modular Systems are pre-assembled and ready to install MEP system with same materials as traditional method of installing single items one by one.

MEP Modules enable coordination and provide efficient solutions for the installation of MEP services which includes HVAC Duct System, HVAC Piping System, Water Supply System, Fire-Fighting Piping System, Electrical Cable Tray & Trunking.



MEP Modular System

Modular System Key Benefits

The Features



Quick Installation



Improved Work Place Safety



Clash Resolution Services



Higher Quality Control
& Quality Assurance



Improved Environmental
Performance



Reduced Material Handling
& Logistics

MEP Modular System



Advantages of Modular System

Installation Comparison

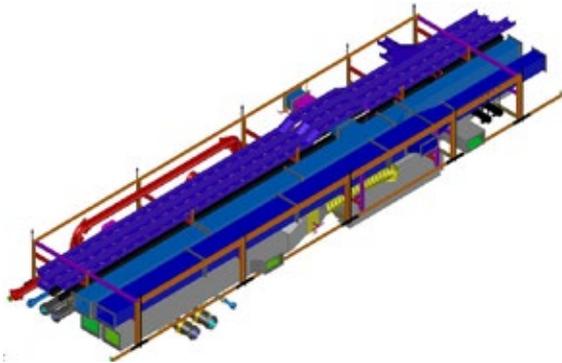
	MODULAR INSTALLATION	TRADITIONAL INSTALLATION
Clash of Services & Trade	MEP service installation is completely coordinated and clash free in congested areas like corridors.	On-site MEP service installation is associated with numerous clashes, improper sequencing, delays and lower productivity.
Higher Quality	Working at floor level in workshop in a controlled manner will greatly enhance the quality of works.	Working on-site in a congested area with little freedom at a high level is likely to result in quality compromises.
Design Freeze	All the MEP services are converted into 3D fabrication cad file, checked for the clashes before we begin with fabrication of modules.	Traditional design is carried out in 2D coordinated drawings which is difficult to review, analyze, find errors and in turn delay in freezing drawings.
Optimum Time Control	The use of 3D designed & coordinated MEP drawings, together with installation at floor level allows for the best possible time control.	Traditional installation is associated with risk of delays and slippage from the program completion due to site conditions, wastages and mishaps.
Achieve Targets as per the Program	Modules for any floor can be built and stored in advance well before receiving any work front.	All MEP service installation is contingent on work front availability and one party/trade must wait for another to finish, based on the sequence of services allocated.
Logistics	Module Installation eliminates the need to move materials, tools, equipment, and scaffolding to the work location.	Transporting material, consumables, scaffolding, and other necessities for traditional installations calls for constant labor mobility.

MEP Modular System

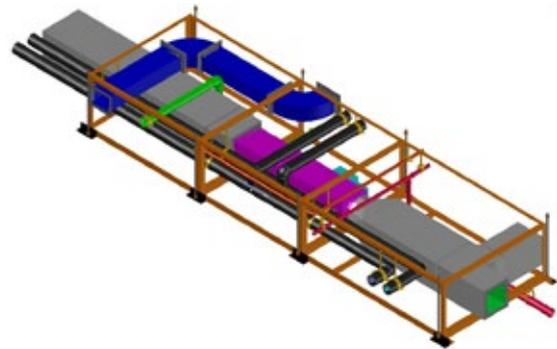
Types of Module Applications

MEP Modular Applications

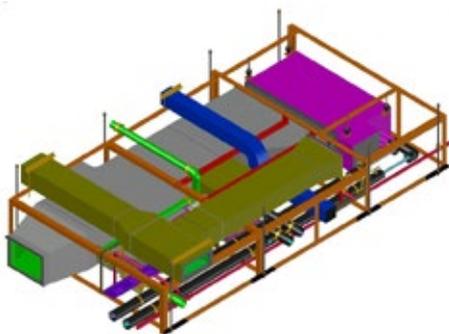
- Horizontal Module
- Kitchen Rack
- Apartment Rack
- Riser Module



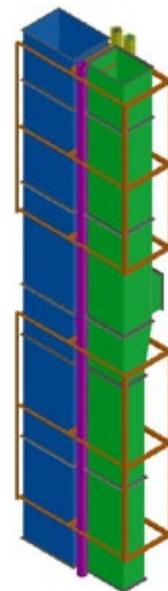
Horizontal Module



Kitchen Rack



Apartment Rack

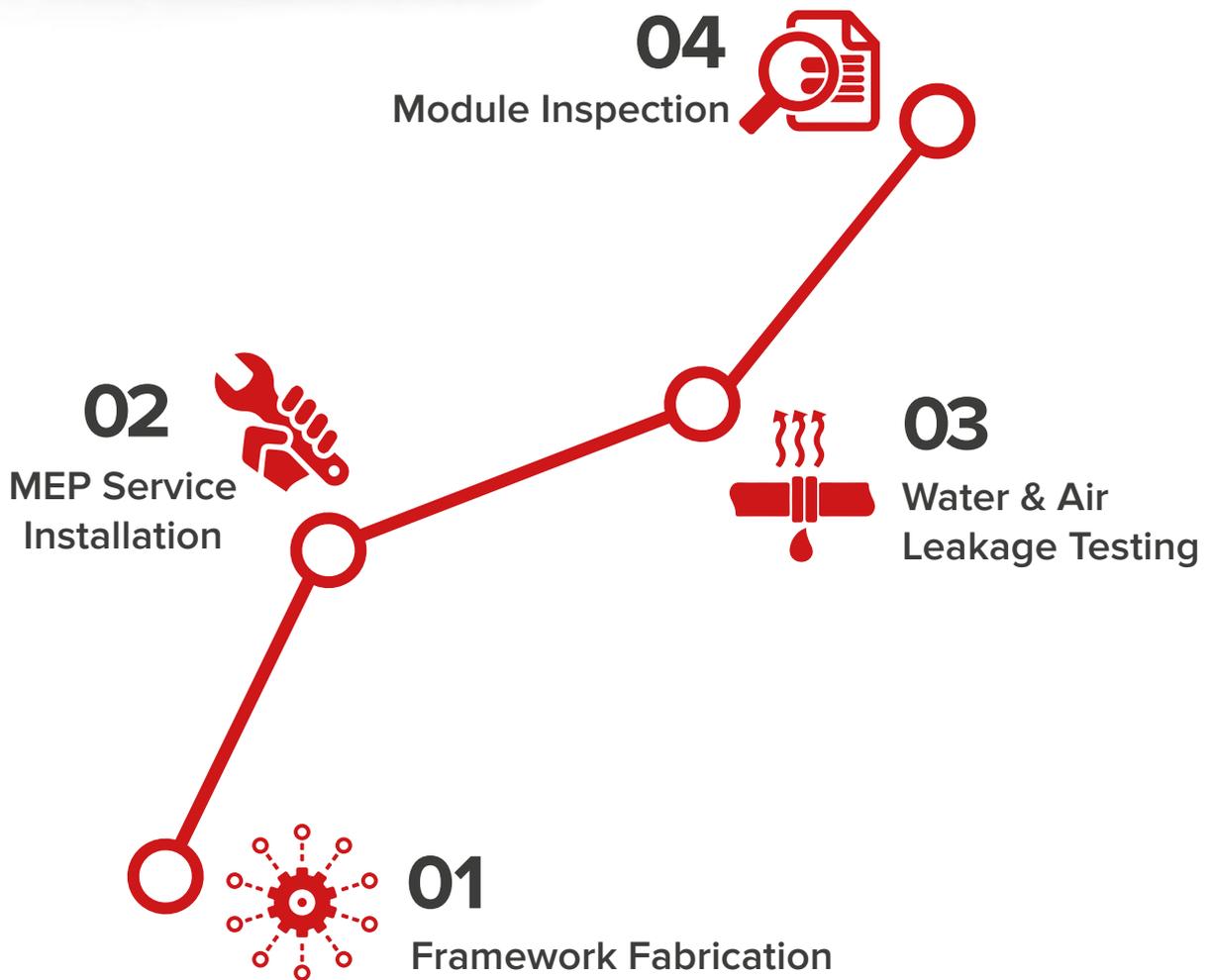


Riser Module

MEP Modular System

Fabrication of Modular System

Fabrication Process



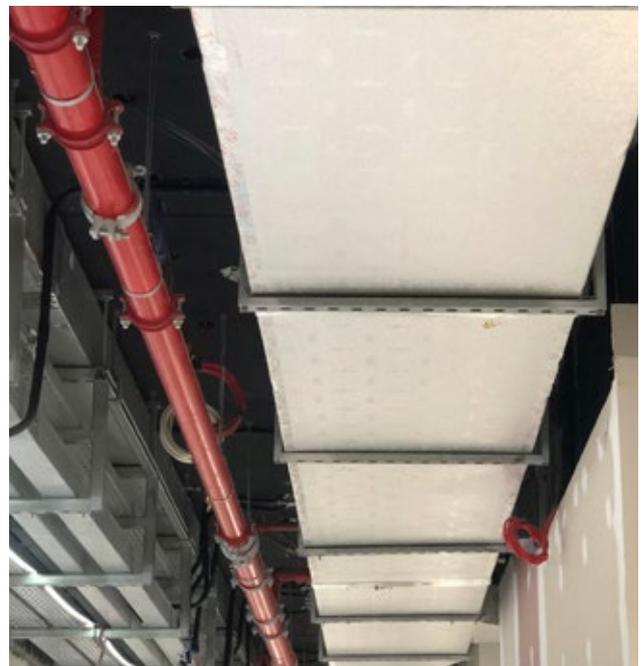
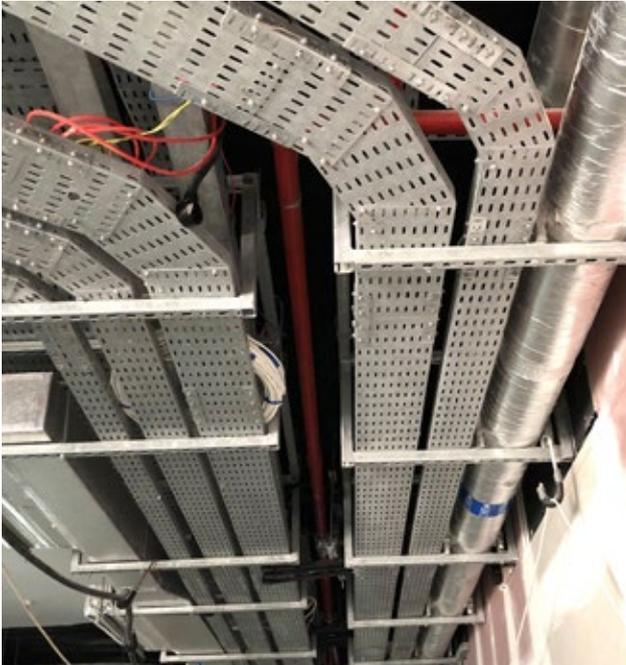
Project Achievements

- Expertise in design, production and installation of around 4000 nos. of module of various types such as Corridor, Riser, Bathroom, Kitchen Rack.
- Successfully done the fabrication & installation of around 500 nos. of chiller plant spool pieces.
- Designed, fabricated and installed around 24 nos. of chilled water pump skids.
- Successfully fabricated & installed 1500 nos. of Chilled Water Pipe supports for the Plant Room.
- Achieved high productivity with a 30% saving on labor cost.
- Achieved 30% saving on consumables in controlled work environment in factory.
- Successfully achieved a comprehensive assembly of MEP services without compromising on Project specification, Individual service standards such as ASHRAE, SMACNA, CIBSE, NEMA, and NFPA.
- More than 50% reduction in NCR and quality issues related to storage housekeeping, installation and execution of works.
- 3D library of approved materials and equipment's from smallest element to largest element of MEP module based.
- Successfully installed 72m of MEP corridor service in a single day at site.
- 20% reduction in estimated wastages of ducts, cable tray fittings, pipe & fittings with optimum coordination using BIM.
- Optimum use of facility for manufacturing the MEP System.
- Expertise in generating RIVET/FAB Cad BIM model drawings for 4000modules with 100% coordination.
- Faster wall clearance and false ceiling clearance for civil activities.
- 40% reduction in time in MEP installation.



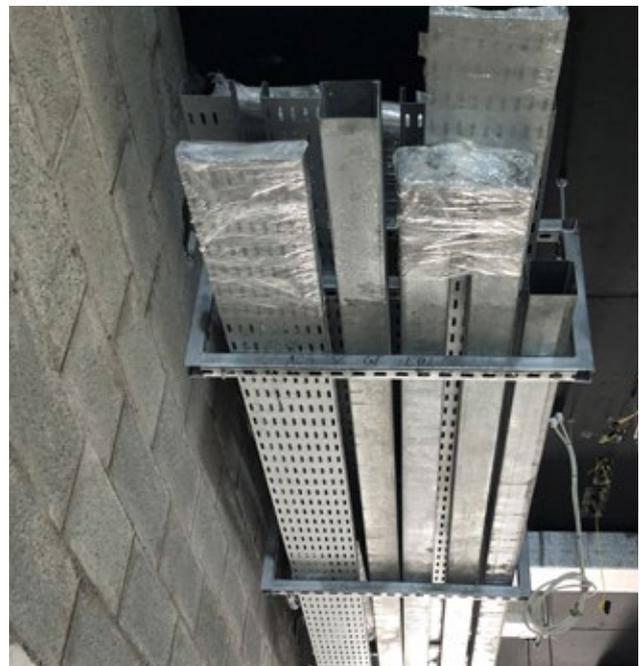
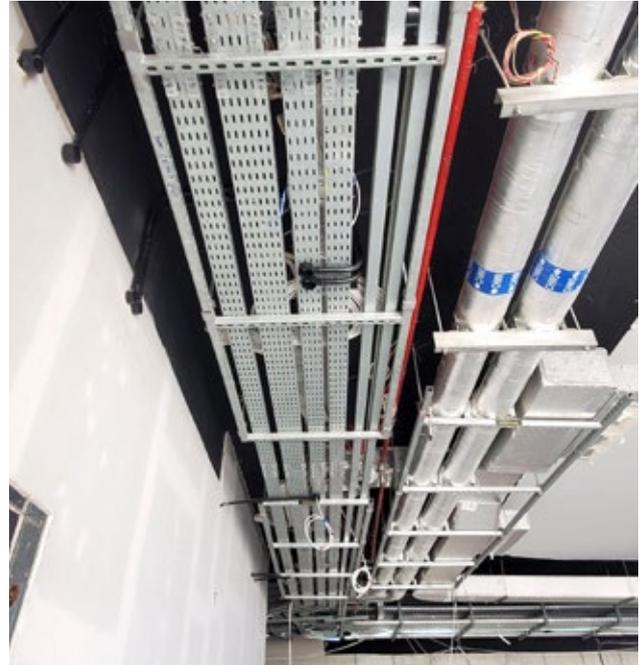
MEP Modular System

MEP Modular Projects



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Serving Over 100 Countries Worldwide



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In line with NAFFCO Flow Control policy for continuous product development, NAFFCO Flow Control has the right to change specifications without prior notice.