



Specific

Design Consultants LLP.
Designing MEP System

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MEP DESIGN FROM CONCEPT LEVEL TO
DETAIL DESIGN & VALUE ENGINEERING

2

MEP BIM-3D MODELING IN REVIT &
2D DRAWINGS IN CAD

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MEP ESTIMATION AND COSTING

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MEP MATERIAL SUBMITTALS

OUR
MEP DESIGN
SERVICES

INTRODUCTION

SPECIFIC DESIGN CONSULTANTS (SDC) is an MEP (Mechanical, Electrical, Plumbing & Fire Fighting) Engineering & Design Consultancy based in India. SDC is offering high-quality MEP Design, 3D Modeling (Revit-BIM), and 2D-CAD drafting services with a focus on sustainability and value engineering. Adhering to international standards, we also provide global outsourcing services.

HVAC SYSTEM DESIGN CALCULATION

SDC provides HVAC System Design to achieve precise thermal comfort aligned with end-user specifications & international standards. We use Elite/Carrier Heat Load calculation software, & other design programs to carry out design calculations.

- Heat Load Calculations
- Duct Sizing & Duct Routing
- External Static Pressure (ESP) Calculation
- Ventilation Calculations
- HVAC Equipment Selection
- Smoke Management System
- Chilled Water System Design
- Pipe Sizing & Pipe Routing
- Pump Head Calculations
- Hydraulic Equipment Selection

**PLUMBING SYSTEM DESIGN
WATER SUPPLY SYSTEM**

SDC excels in designing water supply system & drainage system involves Detail Fixture unit calculations, storage tank sizing, distribution network with pipes & pump head calculation.

- Water Supply Fixture Analysis
- Booster Pump Sizing
- Flushing Tank Sizing
- Domestic Water Storage Tank Sizing
- Hot Water Heater Sizing Calculation

DRAINAGE SYSTEM

- Drainage Fixture Unit Calculations
- Waste Water Treatment Calculations
- Gray Water Fixture Unit Calculations
- Sump Pit Design Calculation
- Storm Water Calculation
- Pump Head Calculation

**FIRE PROTECTION SYSTEM DESIGN CALCULATIONS**

SDC Fire protection system design calculations are executed to determine the requirements for effective fire protection systems in buildings or industrial facilities.



- Fire hydraulic calculation report
- Fire sprinkler report
- Fire Pipe Sizing
- FM 200 system
- Battery calculations for fire alarm & Fire detection System
- Fire alarm matrix-cause & effects
- Fire extinguisher system design
- Fire hydrants system design
- Building codes and standards

ELECTRICAL SYSTEM DESIGN CALCULATIONS

Involve Various Aspects Of Designing Electrical Systems For Buildings, Facilities, Or Infrastructure Projects. Here Are Some Key Calculations Typically Involved In Electrical System Design.

- Lighting Lux calculation
- Voltage drop calculation
- Cable & Cable tray sizing & routing
- Small power & earthing calculation
- Power for equipment calculation
- Power panel design & load schedules
- Breaker sizing, DBS & MDBS selection
- UPS & Battery Bank calculation & sizing
- Transformer & Generator sizing

**DESIGN OF MEP CONTROL SYSTEM**

SDC excels in BMS (Building Management System) design, offering tailored solutions for optimal efficiency in building operations



SDC's expertise encompasses smart control systems for lighting, HVAC, & security, providing a comprehensive approach to building automation.

SDC are expert in critical work areas as:

- BMS arrangement and philosophy
- Details of integration with MEP systems
- Sequence of operation
- Control cables schedule

VALUE ENGINEERING

Value engineering is a systematic approach used to optimize the design, installation, & operation of MEP systems in buildings while maximizing value & minimizing costs. It involves evaluating various aspects of the MEP systems to identify opportunities for improvement in efficiency, performance, sustainability, & cost-effectiveness without sacrificing quality or functionality.

2

MEP BIM-3D MODELING IN REVIT & 2D DRAWINGS IN CAD

MEP BIM (Building Information Modeling) in 3D Revit is Autodesk software to create 3D models for Mechanical-HVAC, Electrical, Plumbing and Fire Fighting systems within a building. It involves the integration of BIM technology with MEP.

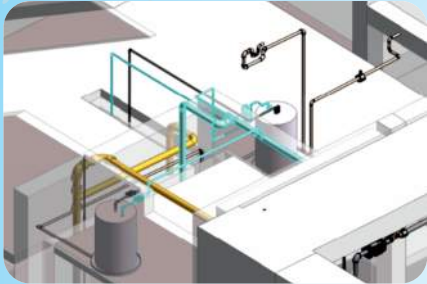
HVAC DRAWINGS

HVAC 3D Drawings display detailed visuals of ducts & chilled water piping, enhancing project understanding and optimizing installation and maintenance processes.



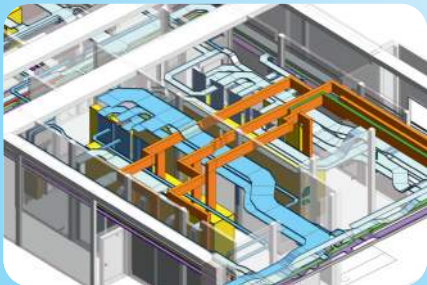
PLUMBING DRAWINGS

Our plumbing shop drawings provide detailed technical illustrations of water drainage supply and waste pipes, including dimensions and color-coded fixtures. Offering precision for efficient fabrication & installation of plumbing systems.



FIRE PROTECTION DRAWINGS

Fire Fighting Revit BIM drawings provide comprehensive details of the system in 3D drawings for Fire Sprinklers, Fire Suppression-FM 200, CO2, Dry chemical, Fire Extinguishers, Fire hose cabinet & the Shop drawings includes Layouts, Sections, Equipment schedules, Schematic diagrams & Isometric drawings, are also carried out accordingly.



ELECTRICAL DRAWINGS

Electrical design drawings include layouts for Lighting, Cable tray, Earthing, & Low-current systems. The low-current drawings includes Data & Communication Networks, Security and Surveillance Systems, Fire Alarm and Smoke Detection Systems, Public Address Systems.

COORDINATION DRAWINGS

Clash detection and coordination drawings in Revit 3D BIM streamline the coordination process, minimize design conflicts, reduce construction rework, and improve overall project efficiency and quality. BIM Clash-free is done before submitting the shop drawing for approval all the drawings are detect and resolve clashes among MEP Services and other various building elements.

* SDC develops drawings from LOD 200 to LOD 500.



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MEP ESTIMATION AND COSTING

SDC MEP Estimation team process extends to preparing Bills of Quantities (BOQ) and detailing the project's scope of work for sales team to issue Bid or Tender, ensuring a comprehensive approach from design to project procurement.

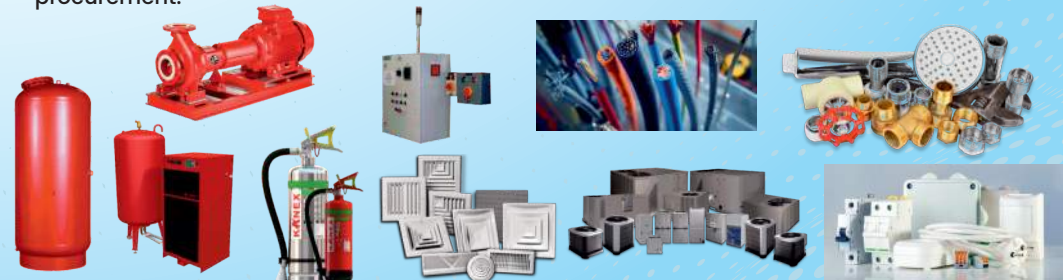
SDC MEP estimation engineers specializes in HVAC, Plumbing, and Firefighting & Electrical System Design and Cost Estimation. Estimation team analyze project requirements, prepare accurate estimates and detail costing for equipment, materials, and Installation labor cost. The engineer also develops project schedules, outlining time lines for system execution.



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MEP MATERIAL SUBMITTALS

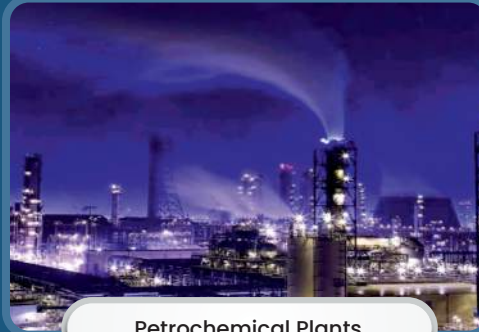
The design team prepares RFQ's based on design calculations and sends the equipment schedules & BOQ's to procurement team for selections of Long lead items (Major & Minor) and bulk materials. Design engineers review the selections with specifications and approved calculations. The approved materials are then escalated to the project team to start procurement.



PROJECT EXPERIENCE



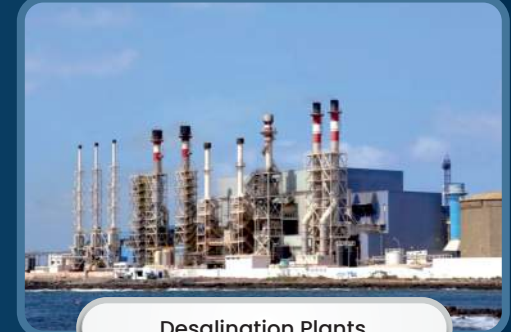
Oil & Gas Refinery Plants



Petrochemical Plants



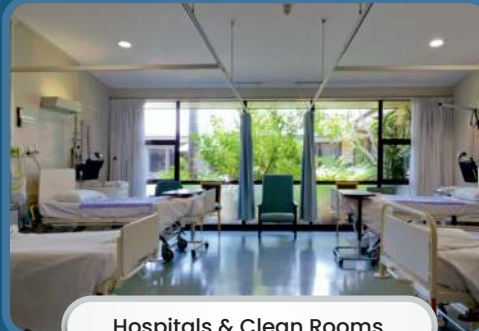
Power Plants



Desalination Plants



Substations (GIS) 380/230/33kV



Hospitals & Clean Rooms



High Rise Buildings & Towers



Residential Buildings



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