

MECHANICAL, ELECTRICAL & PLUMBING

Devoted to Quality Works

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LIST OF SERVICES AND CAPABILITIES



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Mechanical Services (HVAC, Plumbing, and Fire Protection)

1. Heating, Ventilation, and Air Conditioning (HVAC):

- Installation of HVAC Systems: Installation of central heating, ventilation, and air conditioning systems, including ductwork, air handling units (AHUs), and variable air volume (VAV) systems.
- **Chilled Water Systems**: Installation of chilled water systems for cooling, including chillers, cooling towers, and distribution pipework.
- Heating Systems: Installation of boilers, heat pumps, radiant heating, and underfloor heating systems.
- **Ventilation Systems**: Installation of mechanical ventilation, including exhaust fans, air filtration, and ventilation systems for clean rooms, hospitals, or other special areas.
- **VRF/VRV Systems**: Variable refrigerant flow (VRF) and variable refrigerant volume (VRV) system installation.
- **Energy Recovery Systems**: Installation of heat recovery systems to improve energy efficiency.
- **Ductwork Fabrication and Installation**: Custom ductwork for air distribution, including insulated and fire-rated ducting.
- **Building Management System (BMS) Integration**: Integrating HVAC systems with building automation for optimized control.
- **Maintenance and Repair**: Regular maintenance, inspection, and emergency repairs for HVAC equipment.

2. Plumbing Services:

- Water Supply Systems: Installation of domestic hot and cold-water systems, including water tanks, pumps, and pipework.
- **Sanitary Systems**: Installation of sanitary fixtures (sinks, toilets, showers, baths), and soil and waste pipework.
- Rainwater Harvesting Systems: Installation of systems to collect and reuse rainwater for non-potable purposes.
- Water Treatment Systems: Installation of water filtration, softening, and purification systems.
- **Hot Water Systems**: Installation of domestic hot water systems, including calorifiers, heat exchangers, and instant hot water heaters.
- **Boiler Installation and Maintenance**: Installation of boiler systems for domestic and industrial heating.



- **Backflow Prevention Systems**: Installation and testing of backflow prevention devices to prevent contamination of potable water.
- **Underground Plumbing Infrastructure**: Installation of underground piping systems, including water mains, sewer, and drainage systems.

3. Fire Protection Systems:

- **Sprinkler Systems**: Installation of automatic fire sprinkler systems, including wet and dry pipe systems.
- **Fire Suppression Systems**: Installation of specialized systems for high-risk areas, such as FM200, CO₂, and dry chemical fire suppression systems.
- **Fire Pumps and Hydrant Systems**: Installation of fire pump sets, water tanks, and fire hydrant systems.
- **Smoke Ventilation Systems**: Installation of smoke extraction and pressurization systems for fire safety in stairwells and escape routes.
- **Fire Detection and Alarm Systems**: Integration of fire detection and alarm systems with fire suppression systems for full fire protection.

Electrical Services

1. Electrical Power Systems:

- LV/HV Power Distribution: Installation of low and high voltage (LV/HV) power systems, including transformers, switchgear, and distribution boards.
- **Power Generation Systems**: Installation of standby generators, UPS systems, and renewable energy systems (solar, wind, etc.).
- **Electrical Cabling and Wiring**: Installation of electrical wiring systems, including busbars, armoured cables, and conduits.
- **Earthing and Bonding Systems:** Installation of grounding systems for electrical safety and lightning protection.
- Metering and Power Monitoring: Installation of energy meters and power monitoring systems for load management and energy efficiency.
- **Lighting Systems**: Installation of indoor and outdoor lighting systems, including LED, energy-efficient lighting, and emergency lighting.
- **Lighting Controls**: Automated lighting control systems, including daylight sensors, motion detectors, and dimmers.
- **Electrical Maintenance and Testing**: Regular testing, inspection, and maintenance of electrical systems, including PAT testing and thermographic surveys.

2. Fire Alarm and Security Systems:

• **Fire Alarm Systems**: Installation of fire detection systems, including smoke, heat, and flame detectors.



- **Emergency Lighting:** Installation of emergency and exit lighting systems.
- CCTV Systems: Installation of closed-circuit television systems for security monitoring.
- Access Control Systems: Installation of card readers, biometric scanners, and other access control systems.
- Intruder Alarm Systems: Installation of security alarms and sensors for doors, windows, and perimeter areas.
- **Intercom and PA Systems**: Installation of public address systems and intercoms for communication within the building.

3. Data and Communications Systems:

- **Structured Cabling**: Installation of structured cabling networks (Cat 6, Cat 6A, fibre optic) for data and communication systems.
- Telecom Systems: Installation of telephone and VOIP systems.
- Data Centres: Installation of data centre infrastructure, including racks, power, cooling, and cabling systems.
- **Wi-Fi and Networking Systems**: Installation of wired and wireless networking systems for internet and internal communications.
- **AV Systems**: Installation of audiovisual systems, including projectors, screens, and sound systems.

Public Health Engineering Services

1. Drainage Systems:

- **Above-Ground Drainage**: Installation of soil, waste, and vent pipes (SVPs), including rainwater systems and downpipes.
- **Below-Ground Drainage**: Installation of underground drainage systems for stormwater, wastewater, and sewage management.
- **Greywater and Blackwater Systems**: Installation of greywater recycling and blackwater management systems.
- **Rainwater Harvesting**: Installation of rainwater collection systems for reuse in non-potable applications.

2. Sewage Treatment Systems:

- Sewage Pumps: Installation of sewage pumping stations and associated pipework.
- Wastewater Treatment Plants: Installation of systems for on-site wastewater treatment and disposal.

Sustainability and Energy Efficiency Services



1. Renewable Energy Solutions:

- **Solar Photovoltaic (PV) Systems**: Installation of solar panels and inverters for electricity generation.
- **Geothermal Systems**: Installation of ground-source and air-source heat pumps for energy-efficient heating and cooling.

2. Energy Management Systems:

- Building Management Systems (BMS): Installation and integration of building automation systems to control HVAC, lighting, and security systems for energy optimization.
- **Energy Audits and Efficiency Upgrades**: Energy audits and retrofitting services to improve building energy efficiency.

Commissioning, Testing, and Maintenance Services

1. System Commissioning and Balancing:

- HVAC System Commissioning: Testing, adjusting, and balancing (TAB) HVAC systems to ensure optimal performance.
- **Electrical System Commissioning**: Testing and commissioning of electrical installations to ensure compliance with standards.
- **Plumbing and Drainage Commissioning**: Testing of plumbing systems, including water pressure tests and drainage flow tests.

2. Planned Preventive Maintenance (PPM):

- **HVAC System Maintenance**: Routine maintenance for heating, cooling, and ventilation systems.
- **Electrical System Maintenance**: Regular inspection and maintenance of electrical distribution and lighting systems.
- **Plumbing System Maintenance**: Scheduled maintenance for plumbing and drainage systems.

