

# Modular Operation Theatre (MOT) – Complete Turnkey Solutions



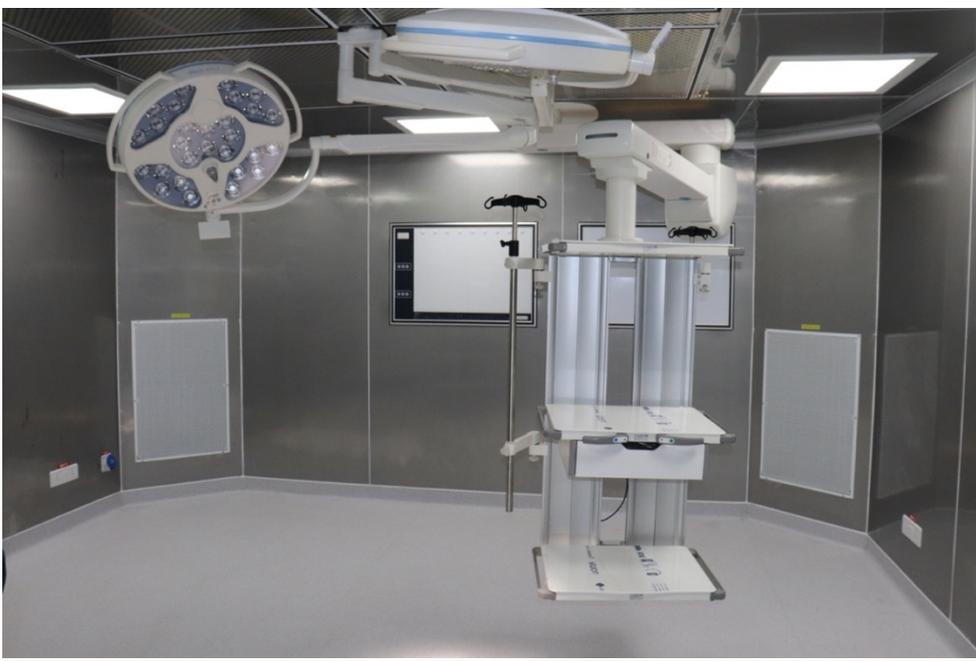
Modern surgical facilities demand controlled environments, sterile construction materials, and integrated medical infrastructure. Our Modular Operation Theatre (MOT) systems are engineered to meet global standards such as **NABH, WHO, HTM, and ISO cleanroom norms**, ensuring a safe, infection-controlled and high-performance surgical environment.

We provide **complete turnkey MOT design, supply, installation, testing and commissioning**, including structural cleanroom elements, air handling systems, medical gases, equipment integration, digital OT solutions, and long-term maintenance support.

## Complete Modular OT Product Suite

We supply every component required for building a high-performance Modular OT—each system designed to integrate seamlessly, reduce infection risk, and enhance surgical efficiency.

## OT Wall & Ceiling Panels (PUF / GI / SS / HPL / PPGI Panels)



Our sandwich panel system forms the backbone of the Modular OT structure. Panels offer seamless, non-porous, and microbial-resistant surfaces ideal for sterile surgical environments.

### Specifications

- Panel thickness: **50 mm**
- Insulation: **40 ± 2 kg/m<sup>3</sup> PUF**
- Surface finishes:
  - PPGI-GI antibacterial coated panels
  - Stainless Steel SS-304 / SS-316
  - High-Pressure Laminate (HPL)
  - PPGG (Pre-Painted Galvanized + Gypsum)

## **Benefits**

- ✓ Seamless cleanroom finish
- ✓ Bacteria-resistant surfaces
- ✓ High fire resistance
- ✓ Long life, low maintenance
- ✓ Premium professional aesthetic

*For more technical information, contact us.*

## **Anti-Static Vinyl Flooring (ESD / Cleanroom Grade)**



Electrostatic-dissipative flooring ideal for OTs and infection-controlled areas.

## **Features**

- Anti-microbial and hygienic
- Seamless hot-welded joints

- Excellent stain & chemical resistance
- Available in conductive & static-dissipative grades

### **Ideal For**

- Operating Rooms
- ICU / NICU
- CSSD
- Cath Labs

*For more technical information, contact us.*

## **Hermetically Sealing OT Doors (HPL / SS)**



Our hermetically sealed doors ensure airtight closure to maintain proper pressure gradients and prevent cross-contamination.

### **Types**

- Automatic sliding hermetic doors
- Manual sliding doors
- Swing doors
- HPL or Stainless Steel finish options

### **Features**

- 99% airtight sealing
- Sensor-based automation
- Flush-mounted viewing panels

- Smooth, cleanable finish

*For more technical information, contact us.*

## Surgeon Control Panel (SCP)



Centralized digital control system for critical OT parameters.

### Functions

- Time and clock display
- Temperature & humidity monitoring
- OT lighting & HVAC control
- OT status indicators
- UPS/IPS integration
- DICOM & BMS compatibility

### Benefits

- ✓ Enhanced workflow
- ✓ Intuitive interface
- ✓ Improves surgical efficiency

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# X-Ray View Panel & Operating List Board



## X-Ray View Panel

- LED-illuminated
- Low heat emission
- 1-film or 2-film options

## OT Schedule Magnetic Dry-erase White Board System



## Operating List Board

- Magnetic or glass design
- Cleanroom-grade construction
- Suitable for sterile areas

*For more technical information, contact us.*

## Laminar Airflow (LAF) Plenum with HEPA Filters



Designed to deliver unidirectional airflow ensuring **Class 100 / ISO-5** sterility directly over the surgical field.

### Features

- H13/H14 grade HEPA filters
- SS/Aluminium frame
- Uniform airflow diffusers
- Supports sterile field integrity

### Benefits

- ✓ Reduces Surgical Site Infections
- ✓ Maintains sterile surgical zone
- ✓ Meets NABH/JCI airflow standards

*For more technical information, contact us.*

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## Peripheral Cleanroom Lights (IP54 Rated)



- LED-based, energy-efficient
- Low-glare illumination
- Flush-mounted cleanroom grade

*For more technical information, [click here](#) or contact us.*

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## Ceiling-Suspended Pendants (Anaesthesia & Surgeon Booms)



Customizable pendants for gas, electrical, and equipment distribution.

### **Customization Options**

- Electrical sockets
- Medical gas outlets (O<sub>2</sub>, N<sub>2</sub>O, Air, Vacuum, CO<sub>2</sub>)
- IV poles & catheter hooks
- Monitor shelves & arms

### **Benefits**

- ✓ Clutter-free OT workspace
- ✓ Enhanced accessibility
- ✓ Ideal for specialized surgeries

*For more technical information, contact us.*

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## OT Pressure Relief Damper



Maintains correct positive pressure inside the OT.

### Features

- SS/Aluminium construction
- Adjustable set pressure
- Motorized/mechanical options

*For more technical information, click here or contact us.*

## HVAC System for OTs

Engineered to maintain critical OT environmental conditions.

### Components

- AHU with HEPA, pre & fine filters
- Aluminium ducting
- Outdoor unit + copper piping
- Return air grilles & dampers

- Fire damper

## Performance Standards

- Temperature: **18–22°C**
- Humidity: **40–60%**
- Air Changes: **20–25 ACH**
- Pressure: **+2.5 Pascal**
- ISO-5 particle count
- Noise < **50 dBA**

*For more technical information, contact us.*

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## Medical Gas Pipeline System (MGPS)



Installed above the OT false ceiling and gas outlets on pendant panels as per ISO standards.

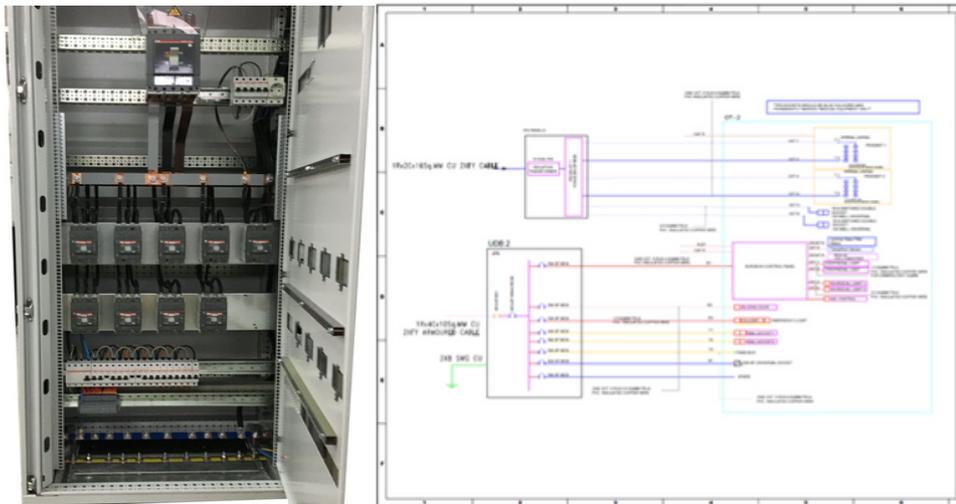
### Includes

- Seamless Copper pipelines (ISO 7396-1)
- Zone valve boxes
- Gas outlets & AGSS

### Benefits

- ✓ Safe & leak-proof
- ✓ OT-ready integration
- ✓ Cleanroom compliant

## Electrical Distribution System for OT



### Includes

- Dedicated OT distribution board
- UPS/IPS integration
- Earthing & surge protection
- Modular wiring

### Optional

- Touch displays
- Power management alerts
- Equipment monitoring

## Pass Box (SS Cleanroom Grade)



For sterile material transfer without cross-contamination.

### **Features**

- Interlocking doors
- UV-C sterilization (optional)
- SS-304 body construction

## **Clean Utility Cabinets / Storage Units**



Built for sterile storage in OT or corridor.

### **Features**

- PPGI-GI or SS construction
- Sliding/hinged options
- Antibacterial surfaces

## **Double Glazed View Window**



### **Features**

- Double-glazed vacuum glass
- Integrated blinds
- Allows natural light
- Enhances long surgeries comfort

## **Differential Pressure Gauge**



## Specifications

- 0–50 Pascal range
- Panel-mounted
- NABH compliant

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## Operating Table



## Features

- SS-304 construction
- Electric/manual models
- Ortho, General, Neuro, Gyn attachments
- Sliding top
- C-ARM compatible
- Economy/Premium variants

## Operating Light



## Features

- Double dome LED
- Camera option available
- Up to 160,000 Lux
- Sterilizable handles
- Shadow-less illumination
- Color temp 3500–5000K, CRI > 95

## Scrub Station



## Features

- SS-304 design
- Sensor/foot operation
- Smooth corner radius
- Single/Double/Triple basin models

## Secondary Exit Door



**For contamination-free exit pathway and zoning compliance.**

## Fire Sensors & Alarm System



## Features

- Heat & smoke detection
- Sprinkler activation
- Emergency communication

## Digital OR / OT Integration



## Features

- Audio-video recording
- OR integration with imaging
- Teaching & conferencing
- Medico-legal documentation
- Patient consent digitalization

## Key Benefits of Our Modular OT Systems

- Seamless cleanroom construction
- Highest sterility & hygiene

- NABH / WHO / HTM compliant
- Advanced components & materials
- Turnkey execution from consulting to commissioning

## Contact us

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