

Modular Operation Theatre – is a clean room controlled environment that prevents cross infections, filters airborne microbes and dust. It should have a Unidirectional Airflow (Laminair flow) which maintains required Temp & Humidity. Should be free from sharp edges, corners. Should be easy to clean, disinfect. No further maintenance needed to reestablish clean room controlled environment.



Modular Operation Theatre

Know how about Modular OT

1. What is Modular OT
2. Types of Modular OT
3. Pros and Cons of materials used
4. Sub systems of Modular OT
5. Roles of other agencies
6. Functions and Usage of Sub systems
7. Planning Phase: Site measurements, Drawing preparation & Drawing Approval
8. Manufacturing Phase: Assembling of materials as per approved Drawings
9. Execution Phase: Installation at Site and coordination with other agencies



Modular Operation Theatre

Modular OT is constructed with various modules to create a clean, hygienic and germ free environment.

It is same as clean room facilities used in Pharmaceuticals industry.

As its name contains the word 'Modular' it means it can be assembled and disassembled so can be shifted to the other place.

We design it as per NABH norms



An Ideal Operating Room

Must meet regulatory guidelines of sterile and infection-free environment

Appropriate Material of construction for **Wall cladding, False ceiling & Flooring** for better control over dust & microbial contamination.

Well designed **Laminar Air Flow & HVAC System** is a key factor for appropriate air quality, air velocity and air changes to achieve desired clean room class.

Space planning & proper placement of various accessories helps ease of accessibility and Provision for flush integration of necessary **Peripherals.**

Clean and Flexible design to facilitate current Technology and Equipment Integration.

Options available for Wall Cladding & False Ceiling Material

High Pressure Laminate Electro Galvanized Board Stainless Steel 304 panel Solid Surface material



Anti-bacterial property	●	●	●	●
Scratch Resistance	●	●	●	●
Impact Resistance	●	●	●	●
Chemical Resistance	●	●	●	●
Resistance to cleaning agents	●	●	●	●
Corrosion Resistance	●	●	●	●
Dry Heat Resistance	●	●	●	●
Resistance to stain	●	●	●	●
Resistance to Boiling water	●	●	●	●
Density (Kg/m ³)	1410	7850	8030	1750
Light Reflection	Diffused	Diffused	Glared	Diffused

Modular Operation Theatre

Sub Systems of Modular Operation Theatre:

1. Wall Panels
2. Ceiling Panels
3. Laminar Flow (LAF)
4. Peripheral Lights
5. Clean Room Doors
6. Surgeon Control Panel
7. Anti Bacterial Seamless Vinyl Flooring
8. X Ray Viewer
9. Writing Board
10. Scrub Sink
11. Pendants
12. Pressure relief Dampers (PRD)
13. Vanishing Blinds (Viewing windows)
14. Storage Units
15. Hands free Telephone

Sub Systems of HVAC

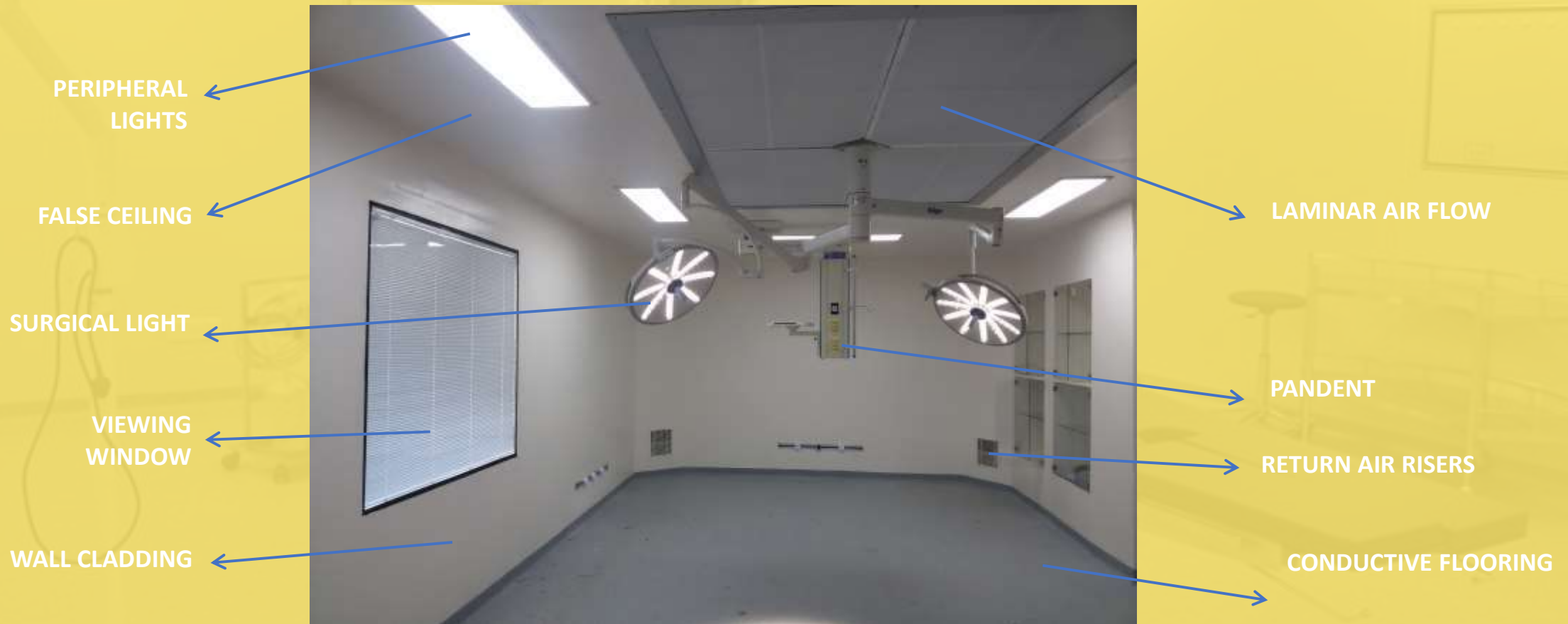
1. AHU (Air handling Unit)
2. Outdoor Unit (Condensor)
3. Ducting System
4. Return Air Grill
5. Control Panel

Sub Systems of MGPS

1. Gas Outlets – Wall / Pendants (O₂, N₂O, MA₄, SA₇, Vac, CO₂, AGSS, Tri Gas etc.)
2. BPC Flow meter & Theatre Suction Unit
3. Copper Pipes & Fittings

Elements of

An Operating Room – What is What



Elements of An Operating Room

DOOR



THEATRE CONTROL PANEL

POWER OUTLETS

Modular Operation Theatre

Wall and Ceiling Panels. – HPL Panels

HPL is 'High Pressure Laminate which is Scratch Resistance, chemical resistance, water resistant, High Impact strength, Malemine quoted, Fire Retarded & Stain resistance.
Optional: UV Resistant

1. Single Skin Panel. Made from 4 mm HPL (Front side), pasted on 37 mm Aluminum Frame. Back side is pasted with 19 mm XLPE Insulation for Thermal Insulation. Mianly used where the brick wall is constructed.
2. Double Skin Panel. Made from 4 mm HPL (Both Side), both HPL sheet is pasted on 37 mm Aluminium Frame. PUF (FR Grade) is filled in between two sheets of HPL for Strengthening and Thermal Insulation. No need to construct a brick wall. Mainly used as a partition wall between OTs, OT and Corridor, OT and Change Room etc. It's very cost effective, space saving and good looking design.



Available Peripherals



Peripheral lights -

Specially designed & approved for clean room application



Doors -

Hermetic sealed door with view panel – Sliding Automatic/ Manual, Hinged doors.



View panels- window with electrically operated Venetian blind.



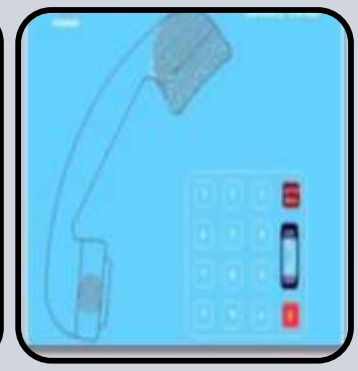
Scrub Sinks - Ergonomically designed Scrub sink with Auto /Manual option.



Static pass box – UV light, Electronic Door interlock system.



Theatre control panel - Touch screen type PLC based Theatre control panel.



Clean room phone – designed to meet clean room norms can be connected to any EPABX system

Key features of Flooring



- 2mm thick Homogeneous Vinyl flooring
- Anti-Bacterial
- Conductive
- Stain resistance
- Chemical Resistance
- High Abrasion Resistances
- Non-Slippery
- Suitable for heavy traffic
- Certified for Clean room Class-A Application

Clean Room Doors



S.S Hinge

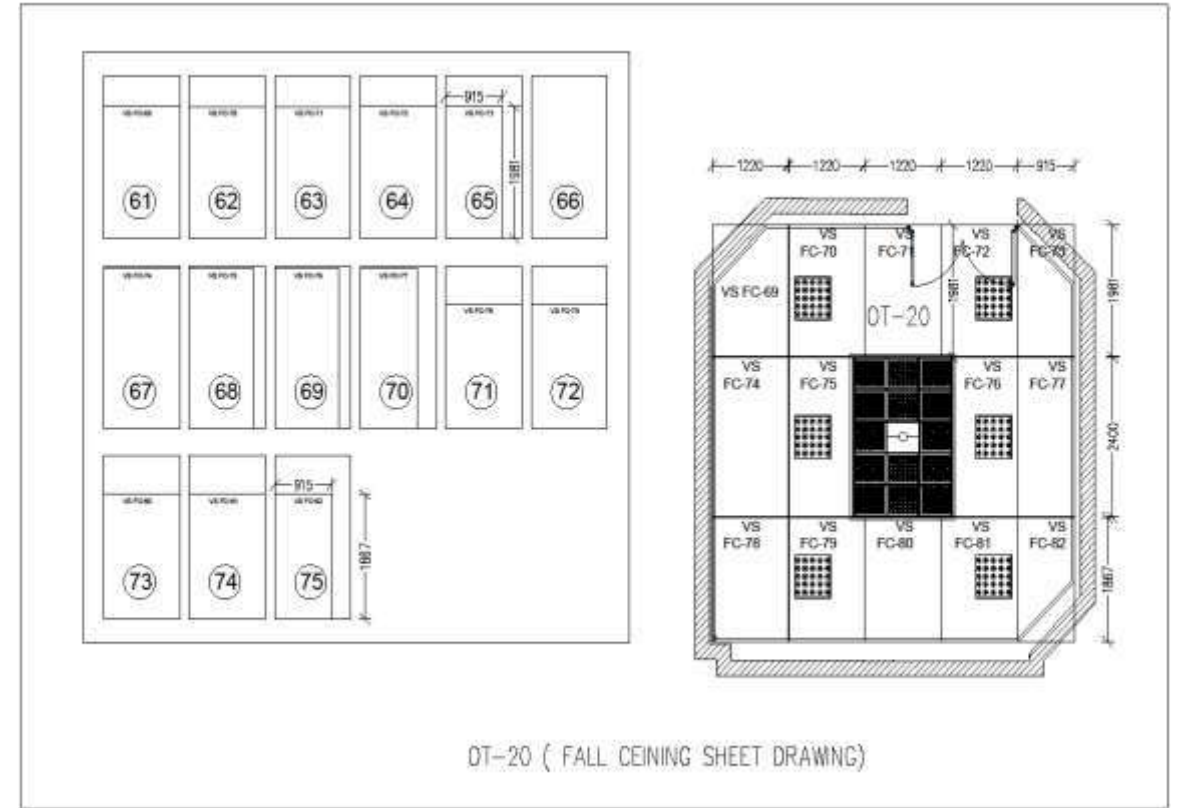
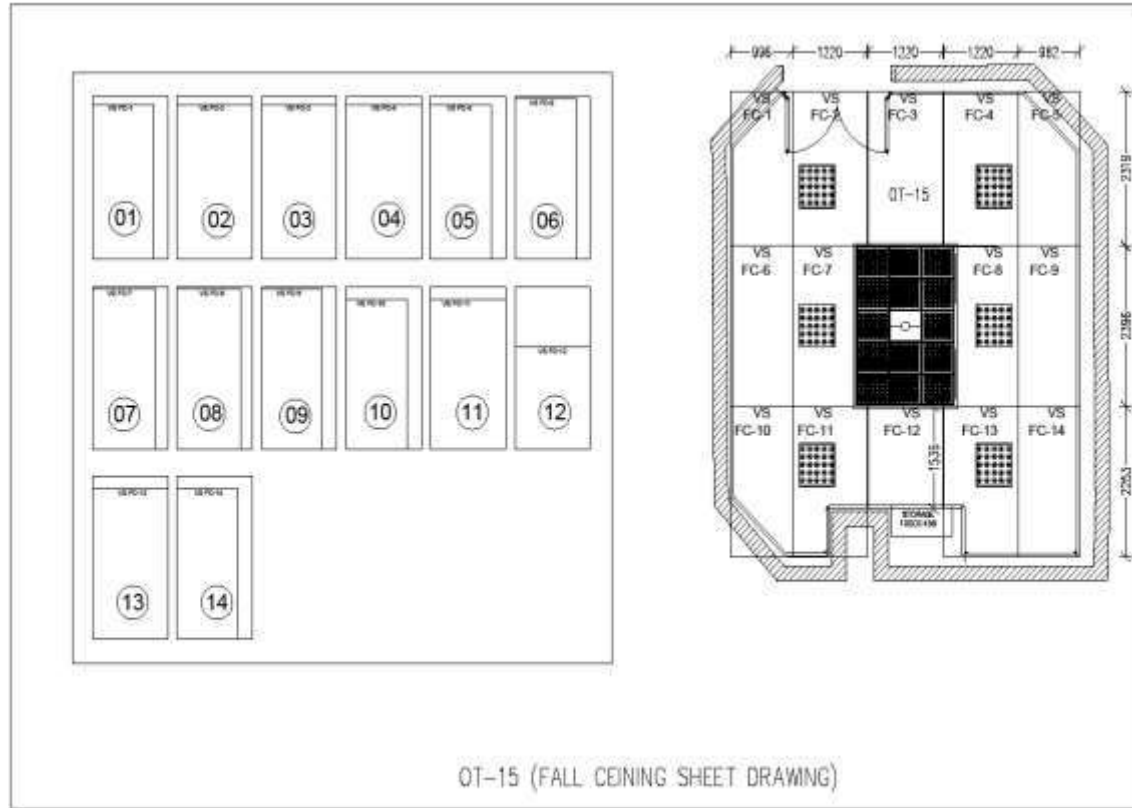


S.S Handle Lock

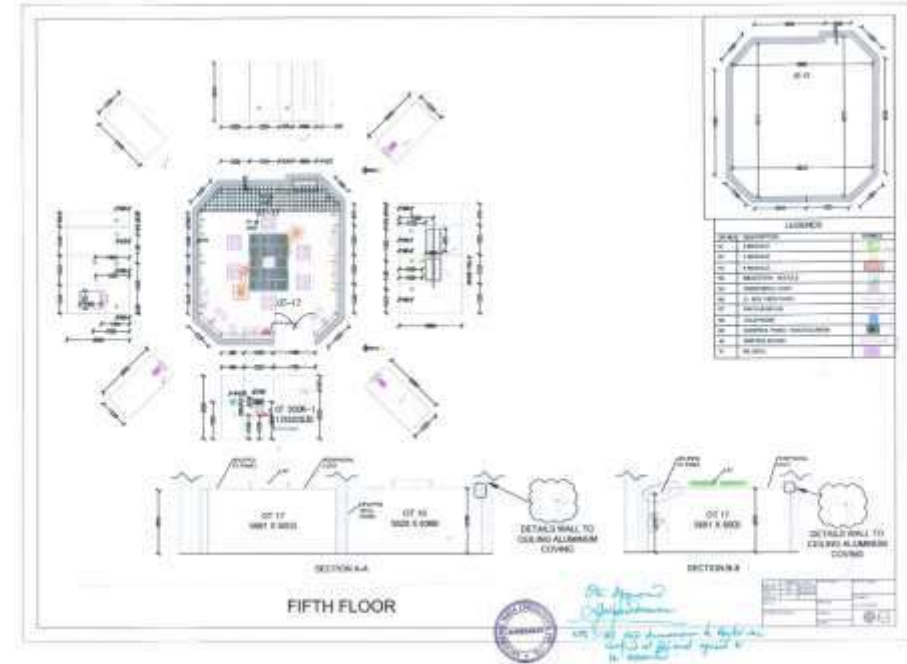
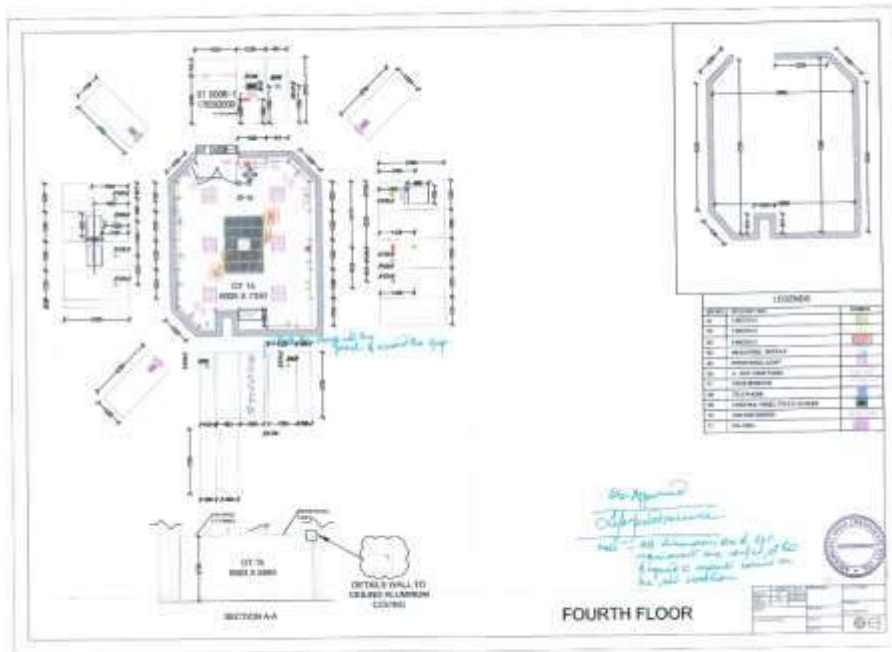


Drop-down Bottom Seal

Final drawing in Detail (To be used during Manufacturing and Installation Process) – For Example



Drawing Approvals by Clients. (After coordination with other agencies like HVAC, Fire, Civil, Electrical, Plumbing etc) – For Example



Clean, Flexible & customized design



Clean lines and special covered corners finish



Flush integration of accessories



Detailed engineering for perfect execution



More effective products, process, service & technology

Projects & References



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