

# MODULAR OPERATION THREATRE BROCHURE



## **KAIZEN AIRTECH SOLUTIONS,**

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# INTRODUCTION

We are Manufacturer, Supplier, Exporter of Modular Operation Theatre / Theater, Modular OT, Operation Theatre Equipments, OT Equipments, OT Plenum Module, OT Wall Panels, OT Room Doors, OT Plenum, OT Wall Panels, OT Windows, OT Flooring, OT Ceiling, OT Lights, Air Handling Units, OT Control Panels. We also provide Operation Theatre / Theater (OT) Design, Setup, Maintenance Services. Our setup is situated in Pune, Maharashtra, India and majorly we serve customers from Maharashtra, Gujarat, Tamil Nadu, South India. Modular operation theatre maintains the conditions of a ceiling, slanted panels, and wall. In a modular operating theatre, hygiene, cleanliness, featured humidity, and the controlled temperature is the critical requirements of operation theatre. We design the modular operation theatre satisfying those conditions. Kaizen's Modular Operation Theatre is the outcome of continued research performed to justify and fulfill fundamental requirements.

Modular OT is useful for single specialty and the multi-specialty hospital. Generally, Operation Theatre has four zones as a protective zone, clean zone, aseptic zone, and disposable zone.

Hospital management takes care of everything starting from the entry of patients and staff till the disposing of exposed materials. In the hospital, there is necessary to maintain hygiene, cleanliness, humidity, temperature precisely. Modular Operation Theatre is helping hospital management in creating OT environment with these key features.

## **Services and products included:**

Kaizen is a leading company for planning, executing and managing turnkey projects. We offer 360° solution for Modular Operation Theatre. We provide tailor-made Modular OT so that it could be installed precisely as per your specific requirement. We execute the projects with perfection. We follow industry standards and technical guidelines of ASHRAE, WHO, cGMP in Cleanroom Systems and NABH norms for Modular OT. A turnkey project of Modular OT includes:

### **Features:**

- OT plenum
- OT Wall Panels
- OT Room Doors
- OT windows
- OT Flooring
- OT Ceiling
- OT Lighting
- Air handling unit
- OT Control panel
- DX unit

# DESCRIPTION

**Modular Operation Theatre** also known as Modular OT, manufactures and designing for hospital operation room, laboratories etc. Most integrated functions are always required in an operating department, such as cleanliness must be preserved and the safety facilities, equipment and device must be maintained any times. Our modular operating theater equipment has been satisfying those conditions consists of a ceiling, slanted panels and wall. In addition, it has a high availability with high workability and enough functions, which is provided for the introduction of a new facility in the future.

In a modular operating department for which the greatest integrated function is required, cleanliness, must be kept and the safety of equipment, facilities and devices must be maintained by any times. Also the working environment for medical staff such as doctors and nurses must be considered from the view point of human engineering. The modular operating theatre satisfying those conditions

consists of wall, ceiling and slanted panels, and is capable of incorporating not only electrical equipment, medical gas system and lighting gears but all the necessary functions and equipment's at need.



In addition, the operating theatre equipment has a high availability of addition providing for the introduction of new facility in the future, establishing as well an operating surroundings with high work facility and enough function. The utmost complex and demanding area of hospital construction is the operating department. The Pre-fabricated [operating theater](#) integrated approach to the construction and co-ordination of operation theatre. The manufactured modular operating theatre offers the advantage of speedy construction combined with design, development and future expansion in surgical technique whilst simultaneously providing a structure of the maximum quality and standards.

**Features:**

1. A constant flow of extremely clean 'bacteria-free' air is reticulated below positive pressure into the working field and air pollutants produced during surgery are removed from the site.
2. Operation Theater with anti-bacterial paint has minimum durability of 15 years.
3. Easy to pure steam cleaned, electro metric (ideal for high humidity areas)
4. Seamless.
5. Vapor permeability (allows substrate moisture to escape) protects against growth of mould, bacteria and yeasts.
6. Thaw resistance / freeze, moisture resistance.

# 1. OT plenum

Kaizen manufactures and provides a high-quality range of ceiling mounted plenum. We produce this plenum boxes in MS powder coated or SS 304. We enclose the plenum with EGP steel panel or PUF sandwich panel. The plenum is provided with horizontally, or vertically installed DOP tested & point-wise scanned HEPA filters with discharge grills diffusers. We offer MS powder coated profile structure with integrated SS frames for the placement of the filter. The aluminum profile provides rails for the secure and seamless installation of the false ceiling. This laminar air flow terminal boxes are acknowledged for an easy installation, compact size, less maintenance. These ceiling suspended laminar air flow unit miniplate HEPA filter out germs, dust particles, and prevent entering into the sterile area.



## **Specifications:**

- Air sealed pressure chamber made from MS powder coated or Stainless Steel 304 grade and mounted on stable profile.
- MS powder coated profile structure with integrated SS frames for the placement of the filter. The aluminum profile provides rails for the easy and seamless placement of the false ceiling.

## Uniqueness

- OT Plenum with an exclusive style of coating
- Resistance to oil vapours or chemical attack or disinfectant
- NABH standards for air conditioning related to room occupancy and temperature
- Maintain a minimum positive pressure of 2.5 Pa inside the OT

## Technical specification:

- Cleanliness: Class 100
- Minimum occupancy: 5-8 persons
- Particle retention: 0.3 micron
- Air velocity: 35 FPM unidirectional flow
- Equipment load: 7-9 kW
- Minimum positive pressure: 2.5 Pa
- Temperature: 21°C with a tolerance of +/- 3 degree
- Power supply: 220v single phase
- Filter efficiency: 99.97%
- Filter Stages: Pre-filter and HEPA Filter

## Technical specifications :

Variables	Specifications
Housing	Stainless steel 304
Panel type	Puff
Air changes per hour	20
Face air velocity	25-35 FPM
Internal pressure	>2.5 Pa

<b>HEPA filter</b>	99.99%
<b>Particle reduction</b>	0.3 micron
<b>Class</b>	H 14
<b>Filter protection</b>	Perforated grille
<b>Temperature</b>	21°C +/-3°C
<b>Humidity</b>	RH 20-60%
<b>Power supply</b>	220V single phase
<b>Cleanliness class</b>	Class 100

## 2. OT Wall Panels

Kaizen provides wall panels exclusively designed and developed for modular operation theatre. Our wall panels help clients to meet the complicated hygiene requirement with customized configurations.

We provide wall panels in three basic categories-

- Laminated walls
- Solid mineral surface walls
- Stainless steel wall

### **Specifications:**

- Kaizen Airtech Modular OT Modular Panel System is specifically designed for aesthetic look and achieving project timelines while maintaining modular flexibility.



- The wall and ceiling panel can be made EGP steel panels or PUF sandwiched panel.
- The inner surface walls will be fixed to the bricks wall with essential support. The wall panel joint will be invisible after the final wall service.
- All the sharp edges and corners will be in radius to avoid bacterial contamination. The internal surface of the room wall will be sprayed with water based liquid plastic, wall glaze or equivalent, approved by the architect to a minimum dry film thickness of 300 microns.
- Laminated/ pre coated/ SS sandwich panels for Modular OTsystem are designed according to the latest CGMP norms.
- Our array quality are modular wall panels, walk able & non walk able ceiling panels with infill material of PUF, EPS, Rockwool and honeycomb.
- Each and every component of the system is engineered & developed for easy installation and functioning.

**Features:**

- Ready for high hygienic standard
- UV-resistance
- Puff Panel
- Insensitive to spots
- Resistant to heat, light, water, steam, solvents
- Highly resistant for chemical attack and corrosion

**Technical specifications:**

Panel Thickness	50, 60, 80, and 100 (mm)
Material	GI Powder or SS304 or Aluminum
Coating	Antimicrobial Coating
Seal	PVC
Insulating Material	Polyurethane foam
Thermal Conductivity	0.02 W/mk at 10°C
Density of Foam	45kg/m <sup>3</sup>
Weight of Panel	1.36kg/m <sup>3</sup>
Compliance	ISO Class8

**Technical specifications:**

	<b>Fire resistance wall</b>	<b>Thermowall</b>
<b>Material</b>	Stainless steel/ Tempered glass/Acrylic/HPL	Stainless steel/ Metal wall
<b>Coating</b>	Anti-microbial powder coat	RAL/NCS
<b>Panel type</b>	Solid core panel	Solid core panel
<b>Wall thickness</b>	>100 mm	>100 mm
<b>Standard width</b>	1,200-1,500 mm	1,200 mm
<b>Wall heights</b>	Up to 5,000 mm	Up to 3,500 mm
<b>Fire resistance class</b>	F130 under EN 13501-2	
<b>Heating system connections</b>		Flexible plastic hoses and compression sleeves
<b>Supply</b>		230-240V/50-60Hz
<b>Hot water heat output</b>		Max. 130 W/m <sup>2</sup>
<b>Electric heating power</b>		Max. 330 W/m <sup>2</sup>

### 3. OT Room Doors

Kaizen devised OT room doors specifically by considering the high-level requirement of international healthcare standards. Our OT room doors fulfil your requirement regarding hygiene, compliant with fire and smoke safety. Our research and development department provides OT Room that is sound-proof. Kaizen's OT Room Door is ready for any third-party system integration for sensing, accessing and monitoring purpose.

Modular OT doors can be configured as single/double swing-out or as horizontal sliding either manual, automatic or semiautomatic. Single entry doors will be 900 mm wide, 2100 tall and 50 mm thick come with 300×400 mm safety viewing windows. Door material will match wall panels and be framed in an aluminum channel for heavy traffic areas. They are sealed with a full gasket jamb and come pre-hung at a factory to ensure proper fit. Standard features include thresholds, commercial grade stainless steel lock sets and safety viewing windows. Door Jamb is a very heavy extrusion designed to eliminate weak door panel frames. All doors are factory pre-hung with hinges and door lockset. Swing-out doors are designed to fit flush with both sides of the wall panel system



and are supplied in several dimensions. Double doors (6070) come with the same finishes and features as single doors.

### Uniqueness

- Manufacturer of both swing and sliding door
- Availability of automatic, semi-automatic manual sliding door
- Application of decontamination barrier
- Hermetically sealed or air-tight doors

### Features

- Stainless steel & Painted stainless steel doors
- Multiple design options
- Resistant for radiation and laser attack
- Highly sound-proof
- Multiple options to accommodate lead through the rail system Hermetically sealed gaskets and handles
- Fire and smoke resistant

### Technical specifications:

Material	Power coated or SS304
Door size	2135mm x 915mm (Swing) 2440mm x 2440mm (Sliding)
Available control systems	Push buttons Automatic access Emergency opening
Display Unit	LED Display
Door type	Automatic

	Semi-automatic Manual
Panel	Ceiled edges with all resistant

**Technical specifications:**

	<b>Hermetically sealed OT door</b>	<b>Radiation shield OT door</b>
<b>Door type</b>	Sliding/Hinge	Sliding/Hinge
<b>Seal</b>	Hermetical	Hermetical
<b>Core material</b>	Injected polyurethane	Polyurethane
<b>Core thickness</b>	52 mm	50 mm
<b>Radiation-proof lining</b>	-	Lead
<b>Lining thickness</b>	-	2 mm
<b>Cover</b>	4 mm HPL on both sides	4 mm HPL on both sides
<b>The thickness of door blade</b>	60 mm	60 mm
<b>Frame</b>	Extruded aluminum profile	Extruded aluminum
<b>Gasket on the wall frame</b>	3 tier EPDM sealing	3 tier EPDM sealing
<b>Door handle</b>	Solid stainless-steel lever	Solid stainless-steel
<b>Compliance</b>	CE marked	CE marked
<b>Pressure capacity</b>	-	75 Pa
<b>Noise insulation</b>	-	Up to 28dB

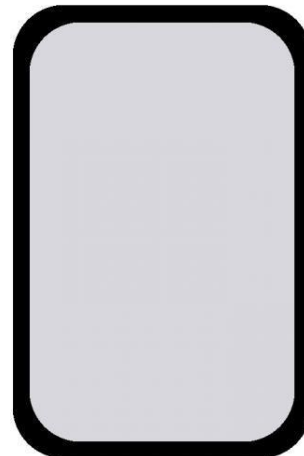
## 4. OT windows

Kaizen manufactures and supplies Modular OT Windows of high-quality coated stainless steel and glass. We provide Modular OT Window with regular as well as electric glass.

Modular OT system all window units are double glazed, and fit flush with both surfaces of the wall panel system (45mm), standard windows are 40" high x 45" wide, with 3/16" tempered safety glass and have beveled sills on the frames. Also available are full view windows (63" x 45"), which allow for a greater view both in and out of the cleanroom. Each panel includes a layer of PVB (polyvinyl butyral) film laminated between two layers of glass. The two panels sit within a structured framework, and air fills the space between the two panels. Optional glass: 1/4" laminated, insulated, wire, tinted (UV), polycarbonate etc.

### Features :

- Hermetically sealed or air-tight windows
- Double toughened glass
- Motorized Venetian blinds
- Sandwiched/toughened Frosted glass with dark film
- Easy to clean windows
- Flushing to the inside wall of the OT



**Technical specifications:**

Material Used	Toughened glass
Available Thickness	10mm
Resistance Control	All resistant

**Technical specifications:**

Single sided window			Double sided window		
Constructi on	Nominal dimensions (In mm)	Window material	Constructi on	Nominal dimensions (In mm)	Window material
<b>Framed window</b>	14325.6x1097 2.8 10972.8x1463 0.4	Tempered glass	Framed window	14325.6x1097 2.8 10972.8x1463 0.4	Tempered glass
		Fire-rated glass			Fire-rated glass
		SDPVC			SDPVC
		Polycarbona te			Polycarbona te
		Acrylic			Acrylic
<b>Frameless windows</b>	14325.6x1097 2.8 10972.8x1463 0.4	Tempered glass	Frameless window	14325.6x1097 2.8 10972.8x1463 0.4	Tempered glass
		Fire-rated glass			Fire-rated glass
		SDPVC			SDPVC
		Polycarbona			Polycarbona

		te			te
		Acrylic			Acrylic

### Switch Glass Privacy Windows:

- Windows that can switch between fully transparent to opaque are available for privacy inside cleanrooms. Kaizen provides international standard window panels with customized configurations ensures better security and higher durability.

### Technical specifications :

Variables	Specifications
Glass type	Laminated/annealed/tempered
Size	1,828.6x3,683 mm
Environmental storage	-20° to 70°C
Operational range	-10° to 70°C
Electrical	65 VAC ± 5V
Power	>1 W/ft <sup>2</sup>
Switching time	Approx. 100 milliseconds at room temperature
Optical transmission	75% view angle
Life	10+ years



## 5. OT Flooring

Types of equipment used in operation theatre are susceptible as well as expensive. Appropriate maintenance of these equipment demands exclusive flooring. Kaizen manufactures and provides uniquely coated Modular OT Flooring. We offer modular floorings which are available in several colors and designs. We provide flooring for operation theatre with ISO graded materials with customized configurations to meet client's requirements.

Our flooring keeps OT germ-free and hygienic.

Epoxy is a thermosetting polymer, which is a result of a reaction that takes place between epoxide "resin" and polyamine "hardener." Epoxy is basically an adhesive with the properties as a glue that sticks things together. As mentioned earlier, epoxy is durable glue consisting of superior level of bonding properties. Epoxy floor coatings don't allow the water to stand over them and these can't be used at the places where water logging is required. Though these epoxy floor coatings can be given desired colors, shine, and durability and this is generally done by adding some compounds to the resin. And this task always demands the services by the experts who have been working with the epoxy floor coatings and know all the standards to be employed with the epoxy floor coatings.

### **Features :**

- Professional look
- Completely Hygienic
- Stain and spot proof
- Prevents the build-up of static electricity or reducing its effects

- Easy to clean
- Anti-bacterial and Anti-fungal
- Chemical resistant

**Technical specifications:**

Material used	Epoxy or Vinyl Flooring
Thickness	Standard 2mm or customized
Resistant to	Chemical Dust Bacteria Fire
Material	Aluminium alloy
Capacity	1000CFM to 35,000CFM
Compatibility	ISO class8

**Technical specifications:**

<b>Variables</b>	<b>Specifications</b>
<b>Total thickness</b>	2 mm
<b>Roll dimensions (WxL)</b>	2x20 mm
<b>Tile format</b>	608x608 mm
<b>Fire rating</b>	Bf1-s1
<b>Slip resistance</b>	R9
<b>Static electrical propensity</b>	<2000V
<b>Electrical resistance</b>	>1011 Ω
<b>Particulate cleanability</b>	85.66% reduction in particle contamination
<b>The action of micro-organism on the</b>	Inert and resistant

<b>flooring</b>	
<b>Chemical resistant</b>	Excellent
<b>Resistance to gaseous H2O2</b>	No damage
<b>Compliance</b>	CE marking

## 6. OT Ceiling

Kaizen provides the specially designed ceiling panels for OT to maintain the clean and sterile environment. OT ceiling panels are highly durable, fire resistant. The ceiling of clean room and modular OT has an antimicrobial coating.

### Technical specifications:

<b>Variables</b>	<b>Specifications</b>
<b>Material</b>	Wet formed a mineral fiber with a durable acoustically transparent membrane
<b>Edge finish</b>	Paint sealed for improved cleanroom performance
<b>Coating</b>	Antimicrobial
<b>NRC</b>	0.70
<b>CAC</b>	CAC 41
<b>Temperature range</b>	0°C-49°C
<b>Humidity</b>	RH 99%
<b>Thermal insulation</b>	0.40 m <sup>2</sup> k/W
<b>Weight</b>	5.28 kgs/m <sup>2</sup>
<b>Colour</b>	White

## 7. OT lighting

Kaizen provides highly efficient, clean and bright lights for modular operation theatre. We use the fluorescent and LED lights that are having customized dimensions and configurations.

### **Florescent Lights Features :**

- Highly durable fluorescent lights
- Total lumens up to 3150
- Customized dimensions and configuration
- Certified with ISO standards for cleanliness
- protection against dust, water, and small items



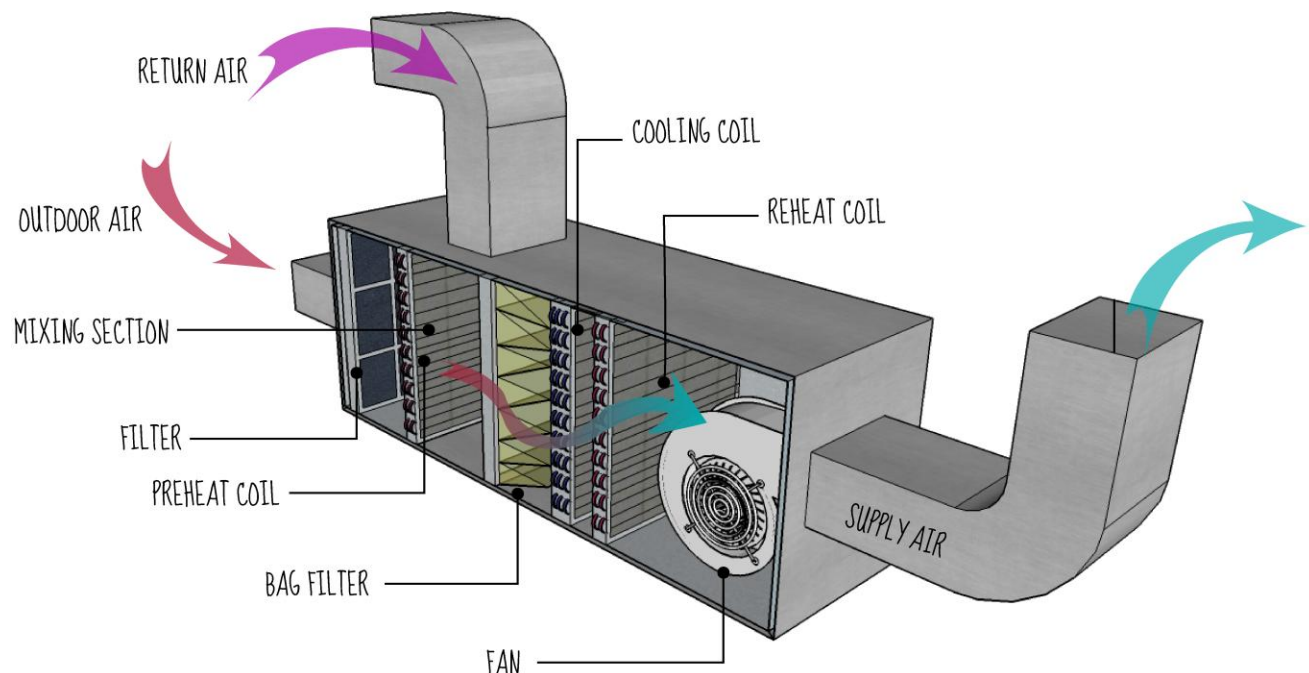
## LED panels performance specifications :

Variables		Specifications
Power		49-77W
Ceiling grid (module length)		300-600 mm
Light source		Replaceable LED
Mains voltage		220V/50-60Hz
Ceiling type		Exposed T-bar ceiling
Colour		White
Color rendering index		>80
Average life		25,000-70,000 hours
Driver failure rate		1% per 5000hours
Ambient temperature		+25 °C
Operating temperature range		-20°C to +35°C
Connection		Push in connector
ISO class		2-9 Fraunhofer certified
Certification		IP65
Housing material		Sheet steel
Cover material		Tempered glass
Internal optic material		Aluminum
Heatsink		Aluminum sheet steel
LED type	Square LED	Rectangular LED
Luminous flux (In lm)	3600, 3900, 6000, 6300	6000, 6300
Color temperature	3000 or 4000 k	3000 or 4000 k
Initial luminaire efficiency	109- 120 lm/W	109- 120 lm/W
Luminous flux tolerance	+/- 10%	+/- 10%
Dimensions	596x596 mm	1196x296 mm

## 8. Air handling unit

Kaizen offers chilled water and DX-type of Air Handling Unit. AHU is used to serve conditioned air with temperature and humidity control and filtration unit for regulating particle count as per industry requirement. The optimized arrangement of mechanical and dynamic-flow components ensures low speeds and internal pressure losses.

Kaizen Airtech produces the new products based on your drawings or designs to meet your actual needs. All the dimensions and colours are up to your choice. We will keep you noted of each steps during the production process. We offer Air Handling Unit system comprises a large insulated metal box that contains cooling, heating, humidity and air quality control element, fan blower with motor. In Clean room Application air quality is most important factor to maintain required Class, AHU is the greatest source of particulate removing it installed between unfiltered air and filtered ai



## **Key Benefits:**

1. Flexibility Design
2. Humidity Control
3. Adjustable Air Flow Velocity
4. Temperature Control
5. Low Vibration

## **Specifications:**

1. **Frame Structure:** Aluminum alloy structure, high strength, light weight, Anti corrosion. The unit adopts the full aluminum alloy anti cold bridge frame structure. Every angle of the frame is connected the aluminum alloy structure component with the excellent strength, light weight, anti corrosion capability.
2. The heat exchanger is made of high-quality air-conditioning 1/2 inch copper heat exchange tube hydrophilic aluminum foil corrugated sheet via mechanical expansion, ensuring close cooperation between copper pipes and fins, bringing small wind resistance and good heat transfer performance, and providing a reliable guarantee for efficient operation of the unit.
3. **Temperature Control:** The heat exchanger is made of high-quality air-conditioning 1/2 inch copper heat exchange tube hydrophilic aluminum foil corrugated sheet via mechanical expansion, ensuring close cooperation between copper pipes and fins, bringing small wind resistance and good heat transfer performance, and providing a reliable guarantee for efficient operation of the unit.
4. **Filtration:** primary filter 10 micron and secondary filter 5 micron with efficiency 90% washable HDPE Media in FRP PU coated Frame for GI model mounting

after mixing chamber. 80% air recalculated and 20% fresh air. Mini plate HEPA filter incased in aluminum frame Final = 0.3 micron with an efficiency of 99.997% (anti –microbial treated media)

5. Strict Quality Control in the every step and make sure 100% high quality before the packing and shipment

## **Temperature Control**

### **Cooling Coil:**

High-quality air-conditioning 12.7 mm copper heat exchange tube hydrophilic aluminum foil corrugated sheet via mechanical expansion

Heating Coil (as per requirement)

1. The structure of the cooling fin is 1/2 inch copper heat exchange tube and corrugated aluminum fin expend connecting, so have high heat exchange efficiency and small wind rage.
2. Free flow aluminum fin configuration provide excellent heat transfer capability with low airside pressure drop.
3. Copper tube with anti corrosive coating expanded mechanically to the above fins ensure efficient transfer

### **Pressure gauge:**

Dwyer make pressure gauge range 0 to 50 mm to ensure required efficiency of HEPA filter.



**Filter:**

1. Multi stage filtration to suit different application conforming to ASHRAE standards
2. Separate primary, secondary and HEPA filter section provided.
3. Primary filter are flange type provided with handles for easy removing and washable.
4. Secondary and HEPA filter section are provided with access door panel with positive locking.

**Control Panel:****DX units:**

Kaizen provides both air-cooled and water-cooled dx units. These DX units comfort the environment inside the operation theatre. We have designed DX units to meet cleanliness and sterile requirements by following NABH guidelines.

**Fan:**

1. The Fan wheel having backward/forward curved blade is made of mild steel with polyester powder coating finish
2. Electrical motor of TEFC type with class F insulated
3. All wheels are statically and dynamically balanced to ISO1940 and AMCA204/3 – G2.5 Standards
4. Air and sound performance ratings are test in accordance to AMCA210 and AMCA300 Standards.

### **Condensate Drain Pan:**

1. Drain pan made of SS 304 corrosion resistance.
2. The whole is dry water dish, slope integrated ,guarantee all the condensate water all been discharged.
3. Dual slope area ensures quick drainage of condensate, prevent microbial growth and hence maintains indoor air quality.
4. UV light to kill fungus and molds, minimizing allergens and allergy causing irritants.

### **Features :**

- Large insulated metal box containing a system for cooling, heating, humidity, air quality control, blower
- Perfect unit for separating unfiltered air & filtered air
- Flexible connection for duck output
- Use of technology for optimum energy use
- Anti-freeze protection
- Interior outer air damper
- Low Vibration
- Easy to clean
- Environmentally friendly refrigerant
- Compliance with ISO 9001 and ISO 14001
- Suitable for multi airflow direction

**Technical specification :**

Airflow	850 CFM
Auxiliary heaters	5KW, 7.5KW, 10KW, 15KW, and 20KW
Refrigerant	R410A
Compressor type	Scroll
Capacity	6,000 Btu/hr
Air throw	3.657 m
Overall dimensions	853 457 x 305 mm

**Technical specification :**

<b>(23.9°C DB, 16.1°C WB, 11.1°C DP) 44.6% RH</b>		
<b>Total</b>	BTU/hr	54000 to 220000
	kW	15.9 to 64.4
<b>Sensible</b>	BTU/hr	54000 to 220000
	kW	15.9 to 64.4
<b>(26.7°C DB, 17.1°C WB, 11.1°C DP) 37.8% RH</b>		
<b>Total</b>	BTU/hr	57000 to 231000
	kW	16.7 to 67.7
<b>Sensible</b>	BTU/hr	57000 to 231000
	kW	16.7 to 67.7
<b>(26.7°C DB, 18°C WB, 11.1°C DP) 32.2% RH</b>		
<b>Total</b>	BTU/hr	60000 to 242000
	kW	17.5 to 71.0
<b>Sensible</b>	BTU/hr	60000 to 242000
	kW	17.5 to 71.0

<b>Electric Reheat</b>	
<b>Housing</b>	Stage aluminum
<b>Capacity (kW)</b>	6 to 18
<b>Number of elements</b>	2 to 6
<b>Number of stages</b>	1 to 3
<b>Supply</b>	230V/50-60 Hz
<b>Hot Gas Reheat (24°C)</b>	
<b>Capacity (kW)</b>	9.5 to 13.5
<b>Humidification</b>	
<b>Capacity (kg/hr)</b>	5 to 8
<b>Power input (kW)</b>	3.7 to 6
<b>Flush cycle</b>	Auto
<b>Evaporator Blower</b>	
<b>Blades</b>	Backward curved
<b>Motor</b>	Direct drive EC motor
<b>Nominal horsepower</b>	3.8 to 4
<b>CFM @ 50Pa</b>	3500 to 12600

**Technical specification :**

<b>(23.9°C DB, 16.1°C WB, 11.1°C DP) 44.6% RH</b>		
<b>Total</b>	BTU/hr	55000 to 254000
	kW	16.0 to 74.4
<b>Sensible</b>	BTU/hr	55000 to 254000
	kW	16.0 to 74.4
<b>(26.7°C DB, 17.1°C WB, 11.1°C DP) 37.8% RH</b>		
<b>Total</b>	BTU/hr	57000 to 269000
	kW	16.8 to 78.8

<b>Sensible</b>	BTU/hr	57000 to 269000
	kW	16.8 to 78.8
<b>(26.7°C DB, 18°C WB, 11.1°C DP) 32.2% RH</b>		
<b>Total</b>	BTU/hr	60000 to 284000
	kW	17.7 to 83.2
<b>Sensible</b>	BTU/hr	60000 to 284000
	kW	17.7 to 83.2
<b>Electric Reheat</b>		
<b>Housing</b>	Stage aluminum	
<b>Capacity (kW)</b>	6 to 18	
<b>Number of elements</b>	2 to 6	
<b>Number of stages</b>	1 to 3	
<b>Supply</b>	230V/50-60 Hz	
<b>Hot Gas Reheat (24°C)</b>		
<b>Capacity (kW)</b>	9.1 to 12.7	
<b>Humidification</b>		
<b>Capacity (kg/hr)</b>	5 to 8	
<b>Power input (kW)</b>	3.7 to 6	
<b>Flush cycle</b>	Auto	
<b>Evaporator Blower</b>		
<b>Blades</b>	Backward curved	
<b>Motor</b>	Direct drive EC motor	
<b>Nominal horsepower</b>	3.8 to 4	
<b>CFM @ 50Pa</b>	3500 to 12600	

## 9. OT Control panel

Kaizen's handy, touch-sensitive and smart control panels are the best suitable for modular operation theatre. Clear image and wide viewing angle aids in critical operating situations. Kaizen's modular OT panel is integrated with the all technical equipment and acts as a central control system for OT. We provide Tile Membrane type control panel with superior quality UV resistant membrane fascia and sterilizable feature.

### Features :

- Separate tiles for a time day
- Time elapse clock
- Control on temperature and humidity
- The medical gas alarm panel
- HEPA Filter status
- Control over air pressure, velocity, and general lighting

### Technical specifications:

Variables	Specifications
Supply voltage	230V/50-60Hz
Power consumption	<30VA
Size	15" TFT
Pixel	0.297 x 0.297 mm
Resolution	1024x768
Maximum image area	304x228 mm <sup>2</sup>
Brightness	450 cd/m <sup>2</sup> min.

<b>Contrast</b>	700:1
<b>Viewing angle</b>	80°
<b>Background light</b>	16,2 Million
<b>Response time</b>	25 ms
<b>CPU</b>	Atom 1.1 GHz
<b>RAM</b>	2 GB
<b>Mass storage</b>	2 GB (Compact flash type)
<b>Interface</b>	4 x USB, HD Audio
<b>Graphics</b>	DVI
<b>LAN</b>	1x 10/100/1000 MB/s
<b>Input current</b>	700 mA