



MODULAR DESIGN OPERATING ROOMS


MADE IN ITALY

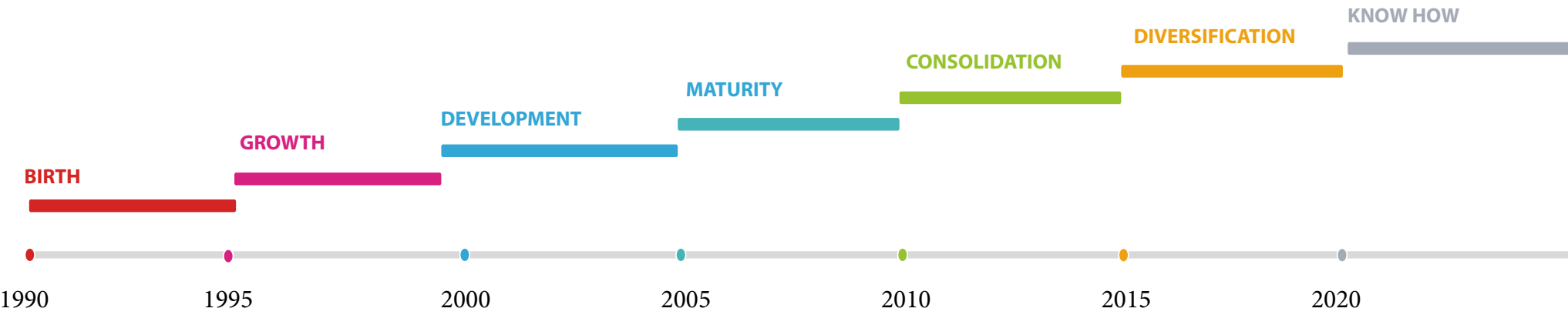




*'We care about: Doctors,
Medical Assistants ... and
especially Patients'*

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30 YEARS OF EXPERIENCE

OVER 6.000 PROJECTS REALIZED

INSTALLATIONS IN OVER 40 COUNTRIES AND 4 CONTINENTS

Adam Srl is an entrepreneurial reality founded in 1990 by Mr. Claudio D'Angelo.

The experience gained over the years in the field of **modular partitions** has allowed its founders to characterize the company from the outset for the care given to the product and for its perfect installation.

In 1995, thanks to the high quality of its product and to the initiative of its founder, Adam is one of the first Italian companies to enter the market of the former Soviet Union, immediately achieving important results and establishing itself in a difficult market such as the Russian one .

At the beginning of the 2000s the **SALUS** wall was born, dedicated to the **hospital market**. This important evolution will allow the company to diversify its reference markets, a characteristic that will prove to be fundamental in the following years. Alongside the office partitions market, an increasingly important market is developing in the healthcare sector that will lead the company to carry out over 80 projects in various hospitals only on the national territory.

In 2006, thanks to the first participation at the Salone del Mobile in Milan, Adam strengthens its presence beyond national borders, creating important distribution relationships in countries such as Switzerland, France, Holland and Germany.

Between 2009 and 2010 the strong domestic market crisis pushes the new generation of the company, represented by the founder's son, Mr. Flavio D'Angelo, to **internationalize** the company by implementing exports at the highest level and differentiating the markets of reference. The company concentrates maximum effort in the area of the Middle East and North Africa, consolidating itself in important markets such as Saudi Arabia, Kuwait, the Arab Emirates, Oman, Algeria and Libya.

An important synergistic effort that in just a few years leads the company to achieve a **70% export turnover share**.

It is in the course of 2012 that Adam becomes one of the very few companies able to guarantee its customers the supply of a range of 360° collection consisting of blind partition walls, glass walls, hospital walls, metal walls, stone walls, walls with integrated and customizable technologies at all levels.

2015 is characterized by the creation of the new **Medical division**, totally independent from the Office division and in which a staff of technicians and engineers specialized in the management of projects of operating rooms and intensive care area in the various countries of the world is incorporated.

Thanks to the opening in 2017 of the new **Dubai office**, Adam is today in all respects one of the Italian companies with the greatest imprinting to export capable of responding to any type of need his clients have and is therefore ready to face all the challenges that the international markets and the thriving Italian market present.

2020 is a fundamental year for the company as it marks the **30th anniversary** of its birth and Adam presents itself as a consolidated reality, mature and ready to face many other years of growth, success and satisfaction.



Adam Srl Headquarter - Bernate Ticino (Milano)



Aluminium production plant



Adam Offices



Detail of the aluminium works

Why MODULAR OPERATING ROOM

ADVANTAGES

1. Lower costs for civil engineering works
2. All utilities can be inspected, anytime, effortlessly
3. Quick and clean system maintenance
4. 90% repositionable system
5. Utilities direct access from maintenance corridor
6. Electric shock safe fully grounded structure
7. Fast and easy upgrade of the O.R.

1 Lower costs for civil engineering works

The SALUS Modular System is totally independent from the existing structural walls and pillars.
For this very reason it reaches the maximum benefits in open-space environments.

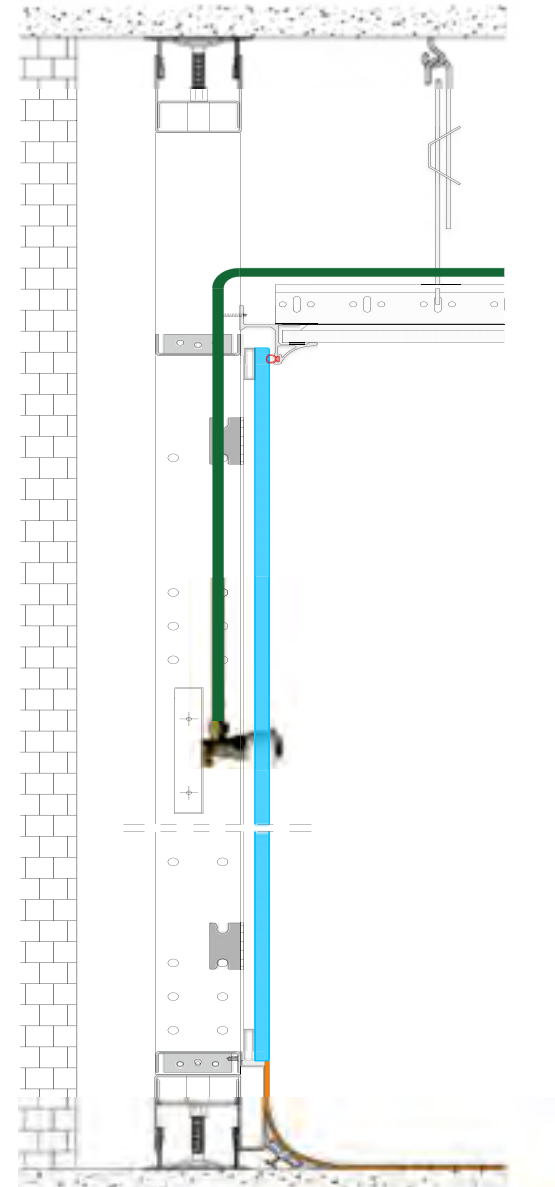
No need to build any wall

- Lower costs for civil engineering works;
- Reduction of time for O.R.'s construction;
- Full flexibility for S.O. design (open-space area);
- The customer can change dimensions and spatial disposition of all the designed areas 'till the final System production.

2 All utilities can be inspected. Anytime. Effortlessly

All utilities find the correct place within the substructure thickness.

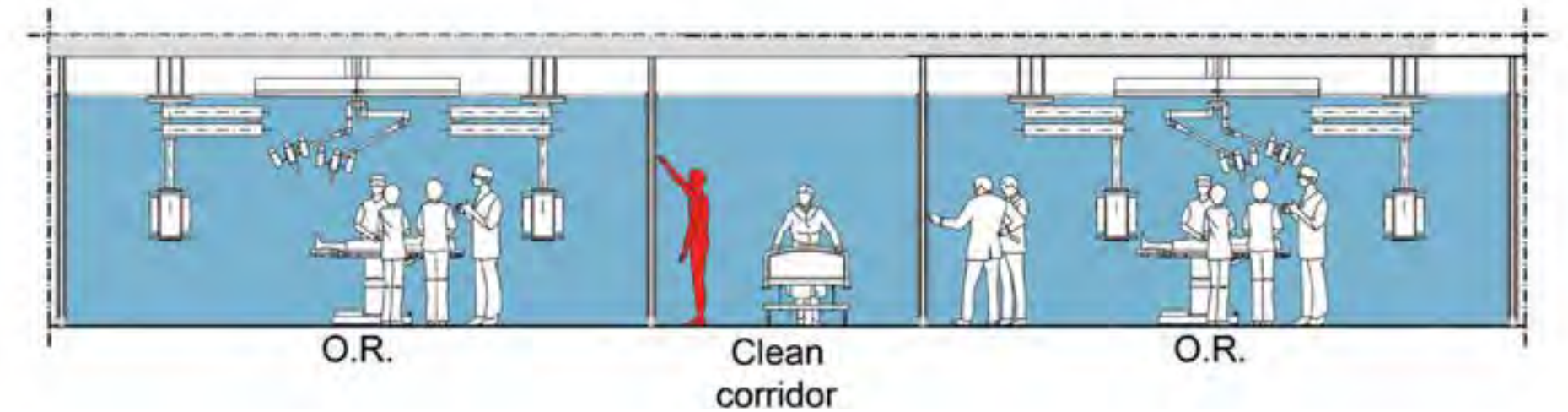
- All utilities can be inspected anytime effortlessly;
- Lower building costs, no need to trace walls;
- Utilities can be moved and, if any accessory is changed, upgraded;
- Utilities can be installed together with the structure.



3 Quick and clean system maintenance

In some cases there is not a dirt / maintenance corridor available, thus maintenance operations could be performed from the sterile area.

- The access is easy and quick;
- The interference with OR scheduled jobs is limited because the maintenance take few minutes.
- No dust is produced by opening the panels.



4 90% repositionable system

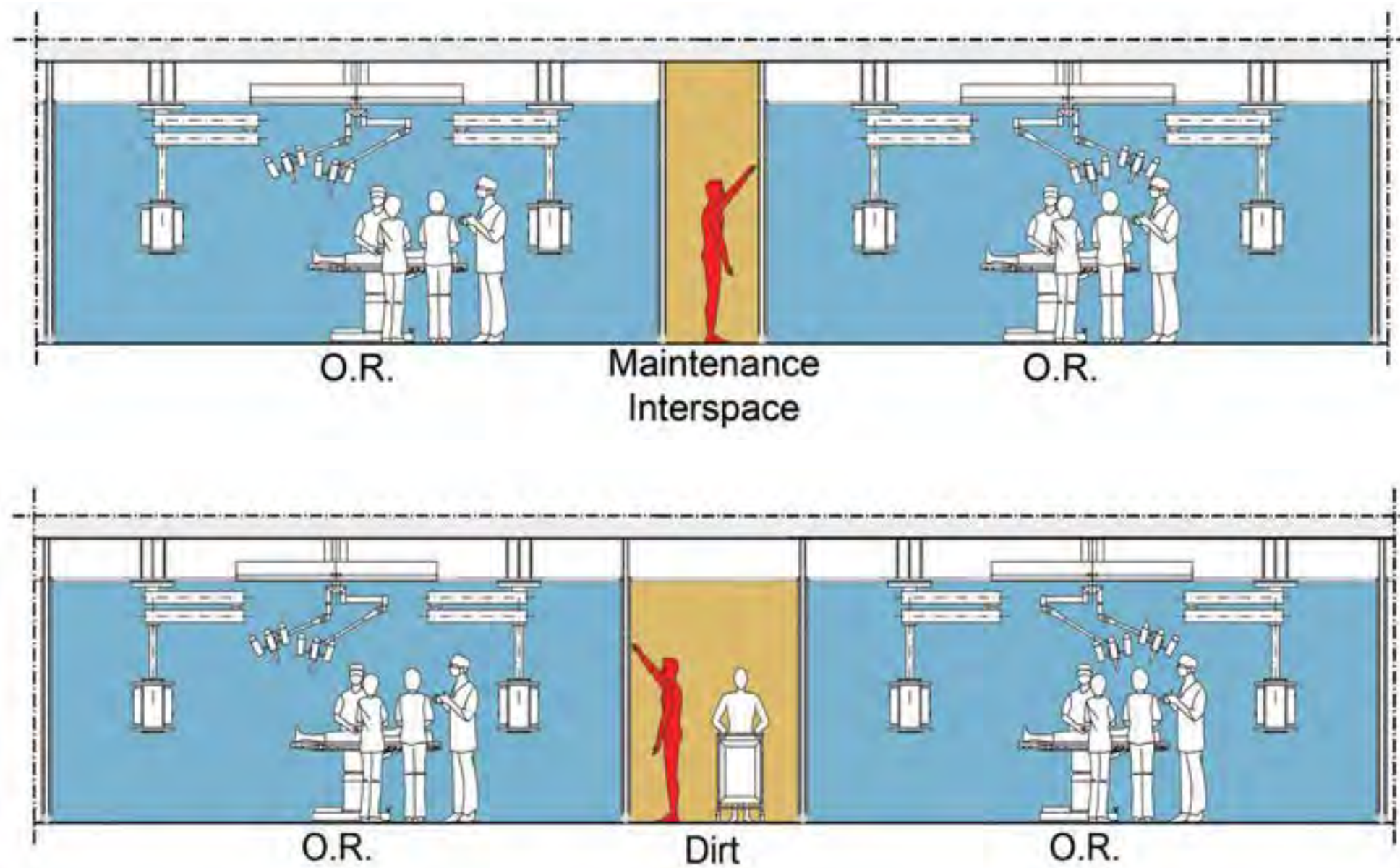
New Operating Rooms built in a temporary position that can be moved to their final positions by recovering the 90% of the material.

- The whole system can be mounted and disassembled with extreme easiness;
- In case of renovation, or to change the room final use, it's possible to move the O.R. in a different place within or outside the Hospital building

5 Utilites direct access from maintenance corridor

The system's flexibility enable the operator to open anytime the covering panels to perform ordinary and extra-ordinary maintenance operations.

- The outside corridor's panels can be opened anytime to maintain the utilities, without access the O.R.'s sterile area.



6 Electric shock safe fully grounded structure

The entire structure, if required, can be grounded.

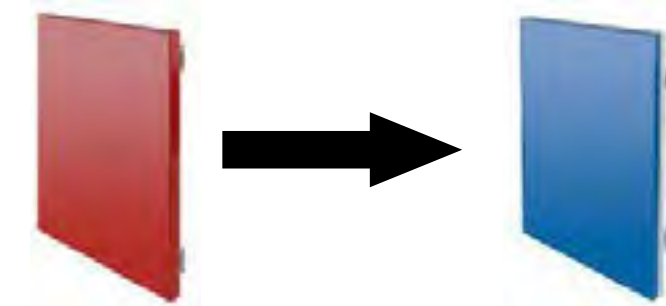
Full benefit for the surgical staff's passive safety.

7 Fast and easy upgrade of the O.R.

The SALUS Modular System, which uses removable silicone gaskets and the panels hooking system is by gravity, allows the replacement of any panel in very few minutes.

- It is possible to change the panels' type and material to apply for future or new technical solutions offered by the market with minimum waste of time and costs.

For example: it is possible to realize an operating room today using powder coated panels and replace it, in the future, with a glass one.



- It is possible to upgrade the operating room in the future in a very simple way and with reduced costs.

For example: it will be possible to change an old-fashioned x-ray viewer with a modern PACS unit.





CHURCHILL PRIVATE HOSPITAL

Blenheim (New Zealand)

- Modular wall system (antiseismic version)
- Antibacterial glass panels
- Back printed glass panels
- Stainless steel connect panels
- Smart glass window
- Stainless steel hermetic automatic doors (sliding and hinged)
- Stainless steel manual hinged door
- Hermetic ceiling (antiseismic version)
- Hermetic lights
- OT clocks
- X-ray viewer
- Stainless steel scrub sink



AL IHSAN HOSPITAL
Baleendah, Bandung - West Java (Indonesia)

- Modular wall system
- Glass panels
- Back printed glass panel
- RGB perimeter lights
- Glass hermetic automatic doors (sliding and hinged)
- Hermetic ceiling
- Hermetic ceiling lights
- Stainless steel surgical cabinets
- Stainless steel pass-thru box
- Surgical control panel
- OT clock
- Led x-ray viewer

**HOPITAL PRIVE DE CASABLANCA
AIN SEBAA - AKDITAL HOLDING**
Casablanca (Morocco)

- Modular wall system
- Antibacterial glass panels
- Back printed glass panels
- Stainless steel connect panels
- Glass hermetic automatic doors (sliding)
- Air intake grids
- Hermetic ceiling + hermetic light
- Plenum with hepa filters and diffuser
- Stainless steel surgical cabinets
- Surgical control panels
- OT clock
- PACS workstation with 43" monitor
- Led x-ray viewer
- Flooring
- External cladding in HPL panels



FROM DESIGN TO INSTALLATION

ADAM S.r.l. has an internal design team with experienced Engineers who design, produce and test every single component of our system. Moreover, we are able to provide design assistance to customers and architects who need help during the design and realization process. 30 years of experience, gave us the capability to develop projects ‘from A to Z’. ADAM S.r.l. provides a complete service from the concept to the project development, technical and financial assistance, project planning, production of all the System elements, complete installation with its own technicians, all over the world.

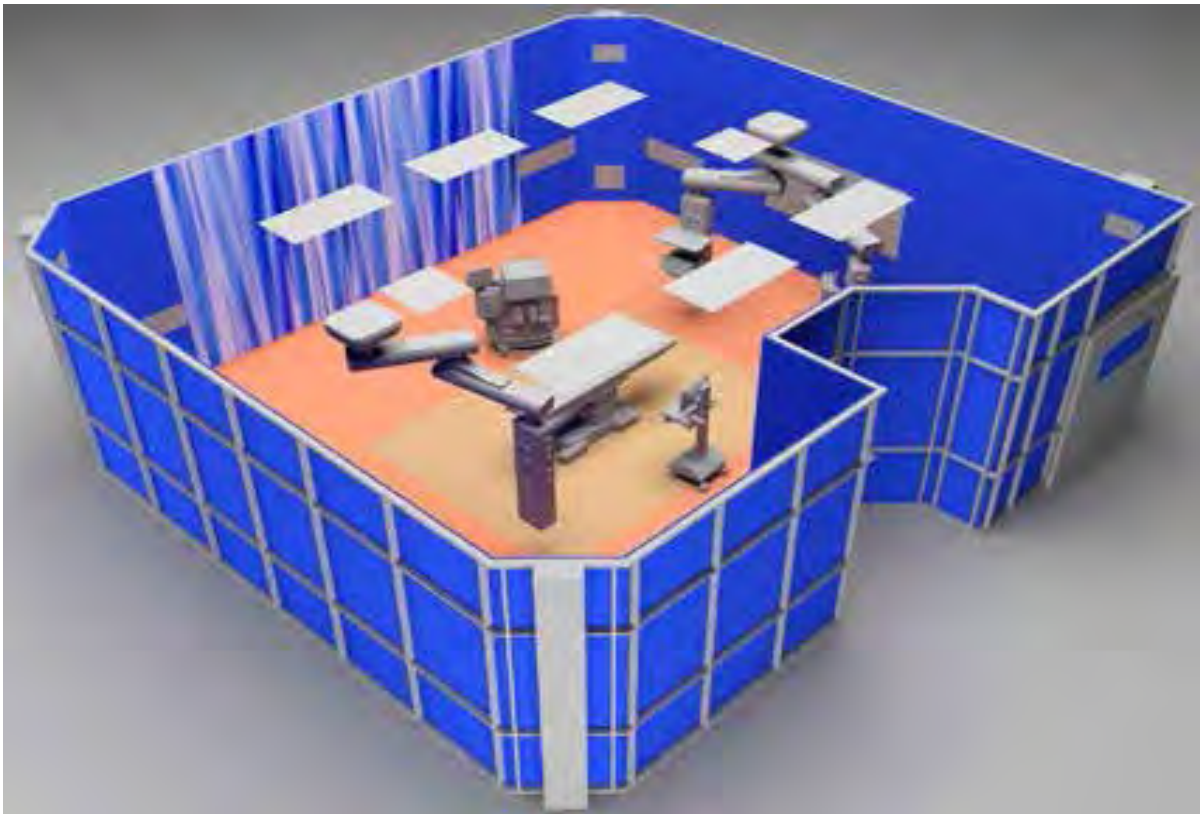
These are **all the processes** involved from the official order to the final technology mount:

1. Site inspection to verify the presence of an open space area or existing walls.
2. Preparation of a specific 3D solution to highlight the combination of materials, colors and finishing that will affect. The final design of the ambient in accordance with the expectations and choices of the end user.
3. Once the design is approved we organize a kick-off meeting on site with all the participants involved in the project (consultant, contractor, resp. companies) to clarify and schedule all the processes and activities planned on the site.
4. Intervention on site to measure and check all the dimensions of the existing area.
5. Preparation of the final executive technical drawings to be approved by the client.
6. Once the executive technical drawings are approved, ADAM starts the production.
7. Tracking on site of the final position of walls to allow the start of the M.E.P. works.
8. Delivery of the Material on site.
9. Installation with a team of specialized and Expert technicians.
10. Regular meetings on site to check and coordinate the progress of the project with all the participant in the Project.
11. Final testing and commissioning of all the products installed on site.

EMPTY BUILDING SITE



BIM 3D PREVIEW

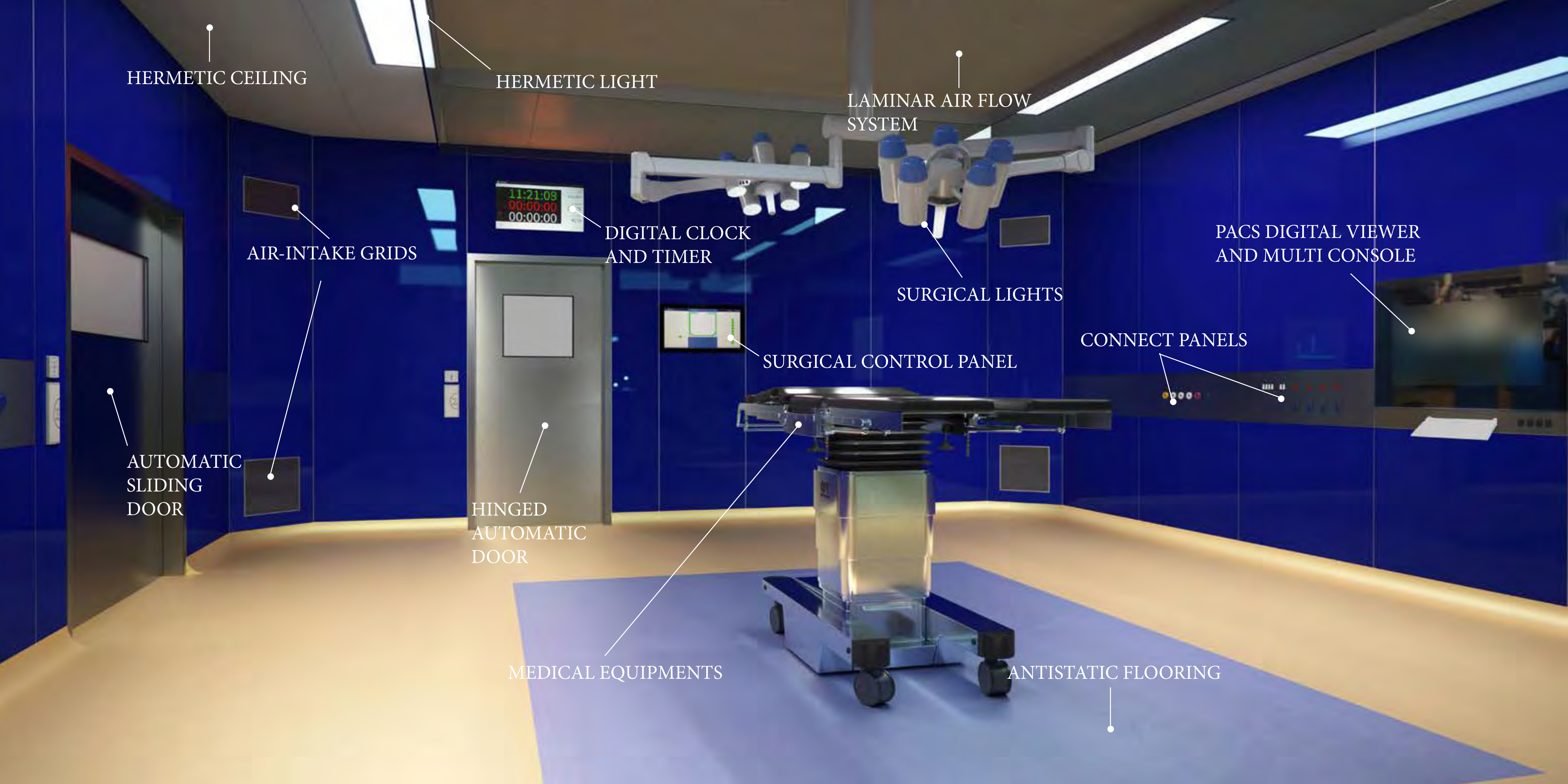


EXECUTIVE TECHNICAL DRAWINGS



COMPLETED BUILDING SITE





HERMETIC CEILING

HERMETIC LIGHT

LAMINAR AIR FLOW
SYSTEM

AIR-INTAKE GRIDS

DIGITAL CLOCK
AND TIMER

SURGICAL LIGHTS

PACS DIGITAL VIEWER
AND MULTI CONSOLE

CONNECT PANELS

SURGICAL CONTROL PANEL

AUTOMATIC
SLIDING
DOOR

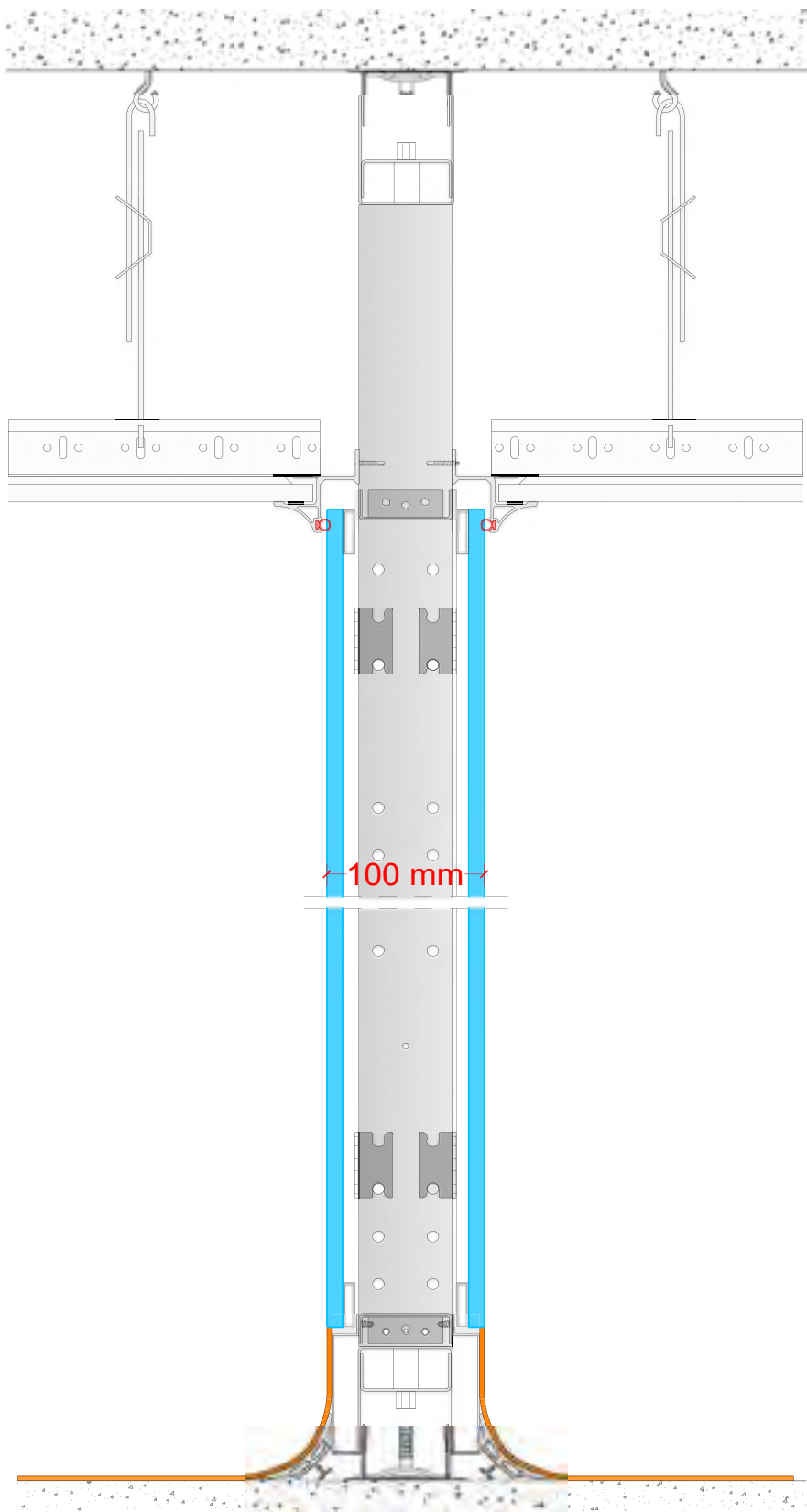
HINGED
AUTOMATIC
DOOR

MEDICAL EQUIPMENTS

ANTISTATIC FLOORING

SALUS MODULAR SYSTEM

TECHNICAL SPECIFICATIONS



SALUS Modular System Specifications

Modular Operating Theatres System composed of a metal substructure covered by panels in different materials).

Substructure composition

- Uprights made of galvanized steel, dim. 60x30mm, thickness 2mm with adjustable feet.
- Horizontal spacer or bars made of galvanized steel.
- Floor and ceiling rail made of galvanized steel 1mm sheet.
- Vertical and horizontal structures provided with buttonholes to allow the passage of cables and pipelines.
- Special neoprene closed cell soft gaskets on all structural elements to seal firmly the frame with the covering panels.
- A PVC perimeter profile allows the flush connection between the wall and the floor - radius 45mm.

Self-standing upright (up to 550cm)

The uprights are made of high thickness galvanized steel (dim. 60x30x2 mm). Such a high thickness guarantees a particular strength. They are able to withstand any static and dynamic stress from pensiles, panels and sliding doors.

The core of the Salus system is the sub-structure that lie behind the face panels.

This kind of structure is specifically designed to satisfy the highest standards of cleanliness for sterilized areas. The framework is able to get inside all the required utilities.

The sub-structure is entirely made of galvanized steel and it ensures both components dimensional stability and maximum resistance to fire.

All components are class 0 fireproof.



ELECTRO - MAGNETIC SHIELDING



LASER PROTECTION



FIRE PROTECTION



NOISE PROTECTION



EARTHQUAKE RESISTANT



TIGHTNESS PROTECTION



X-RAY PROTECTION



HYGENIC PROTECTION



ENVIRONMENTAL PROTECTION

CURVED PROFILE WITH INTEGRATED SHELL

A special curved profile is placed between the vertical partition and the planar counter-top ceiling.
It is useful to guarantee the air tightness and to stabilize the whole ceiling surface.
This profile comes very helpful to the maintenance operations, because it allows to disassemble the partition panels without pulling apart the whole counterceiling. Without any gap or sharp corner, this profile allows a very easy and complete cleaning of the surface.



GASKET ON THE MAIN RAIL

This gasket is used to reduce the noise and vibrations passage between the structure and the floor.
With a sound insulation treatment can reach 50 dB of acoustic insulation.



ADJUSTABLE FEET

Two adjustable feet on both ends of each upright allow the perfect alignment and smooth levelling of the structure.
The structure adjustment is an essential element in order to get the perfect levelling of the structure.
This allows to disassemble and reassemble all the covering panels without the use of screws.



PVC SHELL PROFILE

PVC shell profile which snaps onto the floor and creates a monolithic surface.



HIGH PERFORMANCE ACOUSTIC GASKET

Even on the bars or spacers, interposed between the structure and the covering panels, a 3 mm neoprene closed cell soft gasket is applied to ensures watertight and acoustic insulation.

All the installed panels can hook to the structure squeezing perfectly this elastic gasket to avoid completely any possibile passage of air.

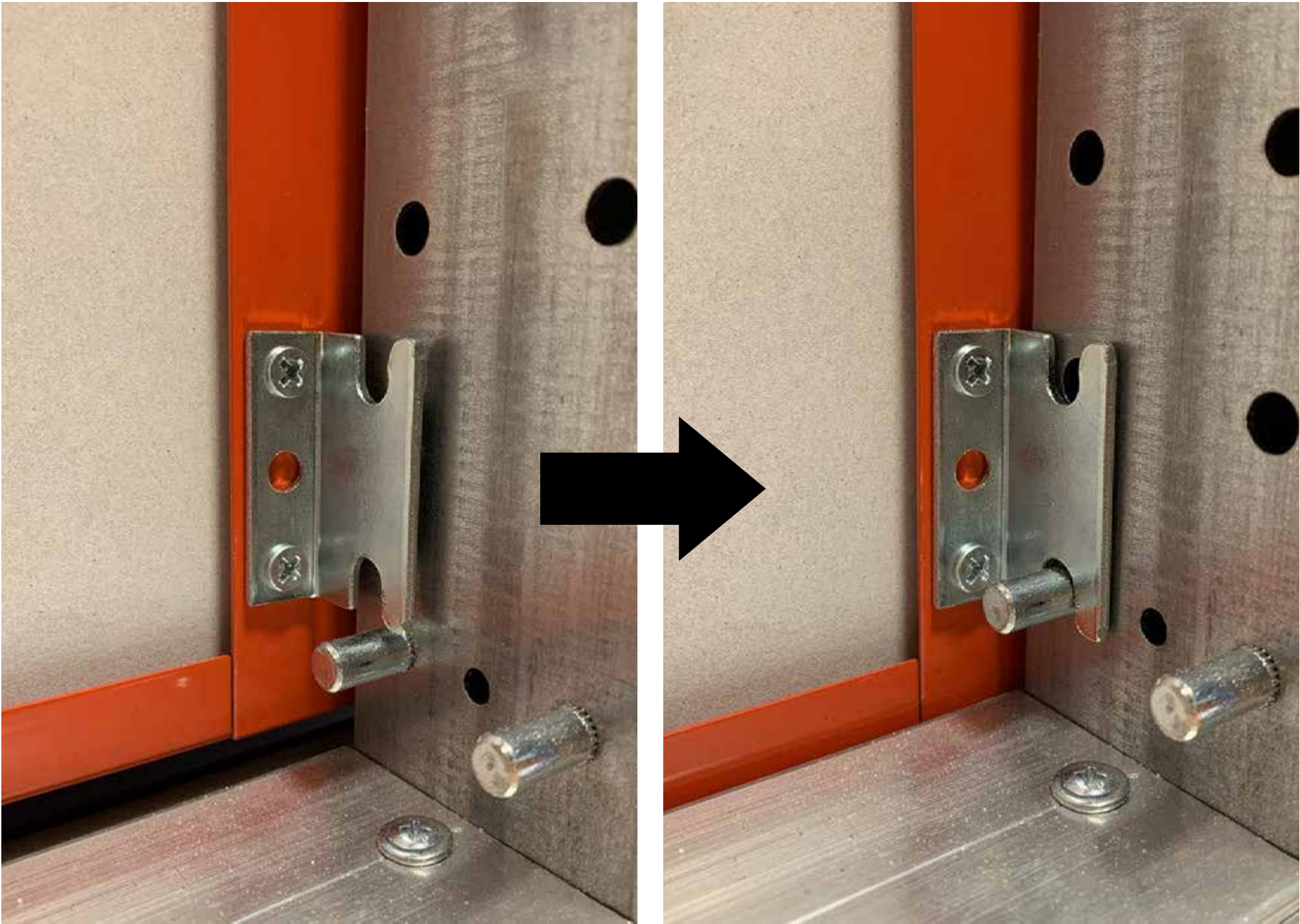


COUPLING SYSTEM

The peculiar coupling system for the support of the panels allows maximum flexibility.

It ensures the removal and replacement of each single panel without interfering on the adjacent ones, thanks to the 6 mm shutter.

The connection between the coupling brackets and the support compass is made in such a way that the panel, due to its weight, hooks up and compresses against the gaskets that cover the entire structure. As a consequence, this connection creates a protection against dust and pollutant infiltrations and helps to reduce the transmission of noise.



SEALING WITH SILICON GASKET

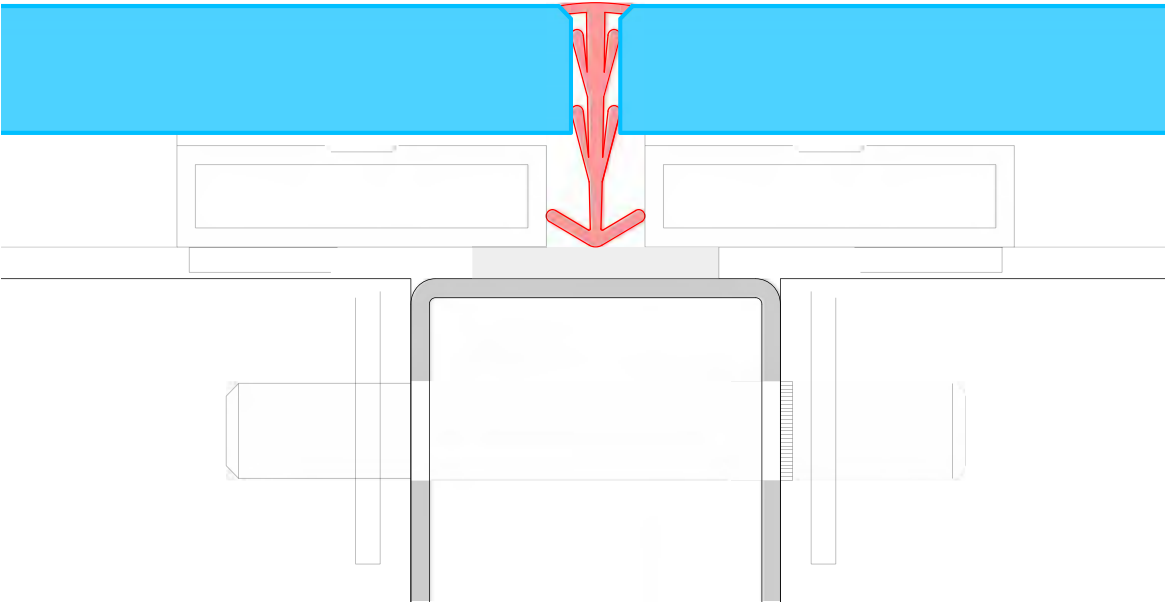
The hermetic sealing between the coating panels is realized through the use of a non-toxic silicone gasket.

The seal can be removed to allow easy disassembling of each panel. There are different colors of the compound to reach the best aesthetic solution.

Conformity to FDA and BfR Empfehlung

The ingredients of SR-60/T listed in the positive list of the following regulations:

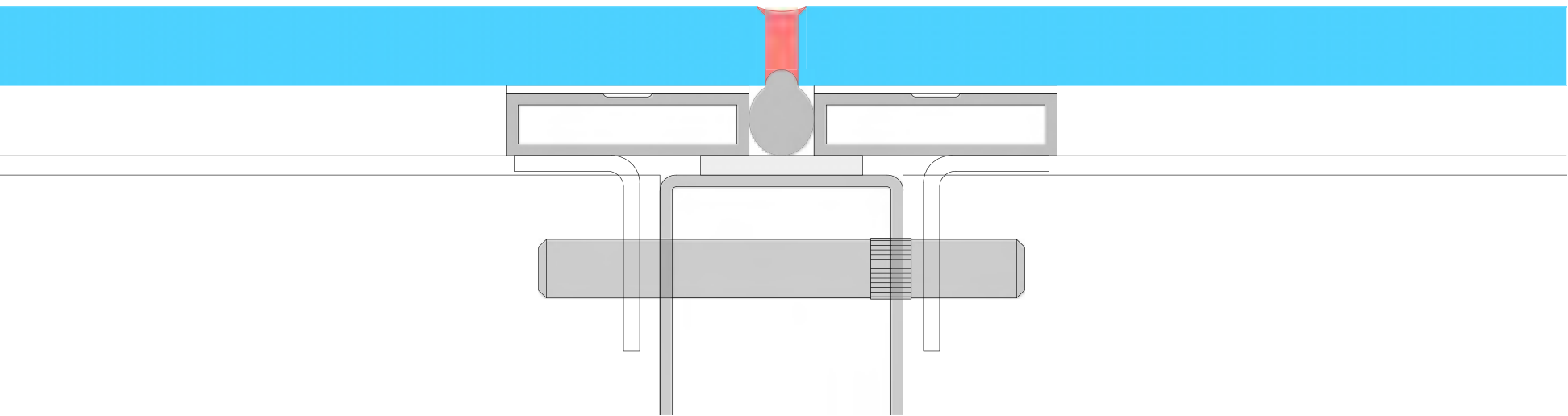
- a) Code of Federal Regulation, issued by the Food and Drugs Administration (FDA) 21 CFR §177.2600 ("Rubber articles intended for repeated use"). (U.S.A.)
- b) BfR Empfehlung XV (Germany)
- c) "Arrêté Ministériel du 25 novembre 1992 relatif aux matériaux et objets en élastomères de silicone mis ou destinés à être mis au contact des denrées, produits et boissons alimentaires". (France)
- d) D.M. 21 marzo 1973 (Italy)



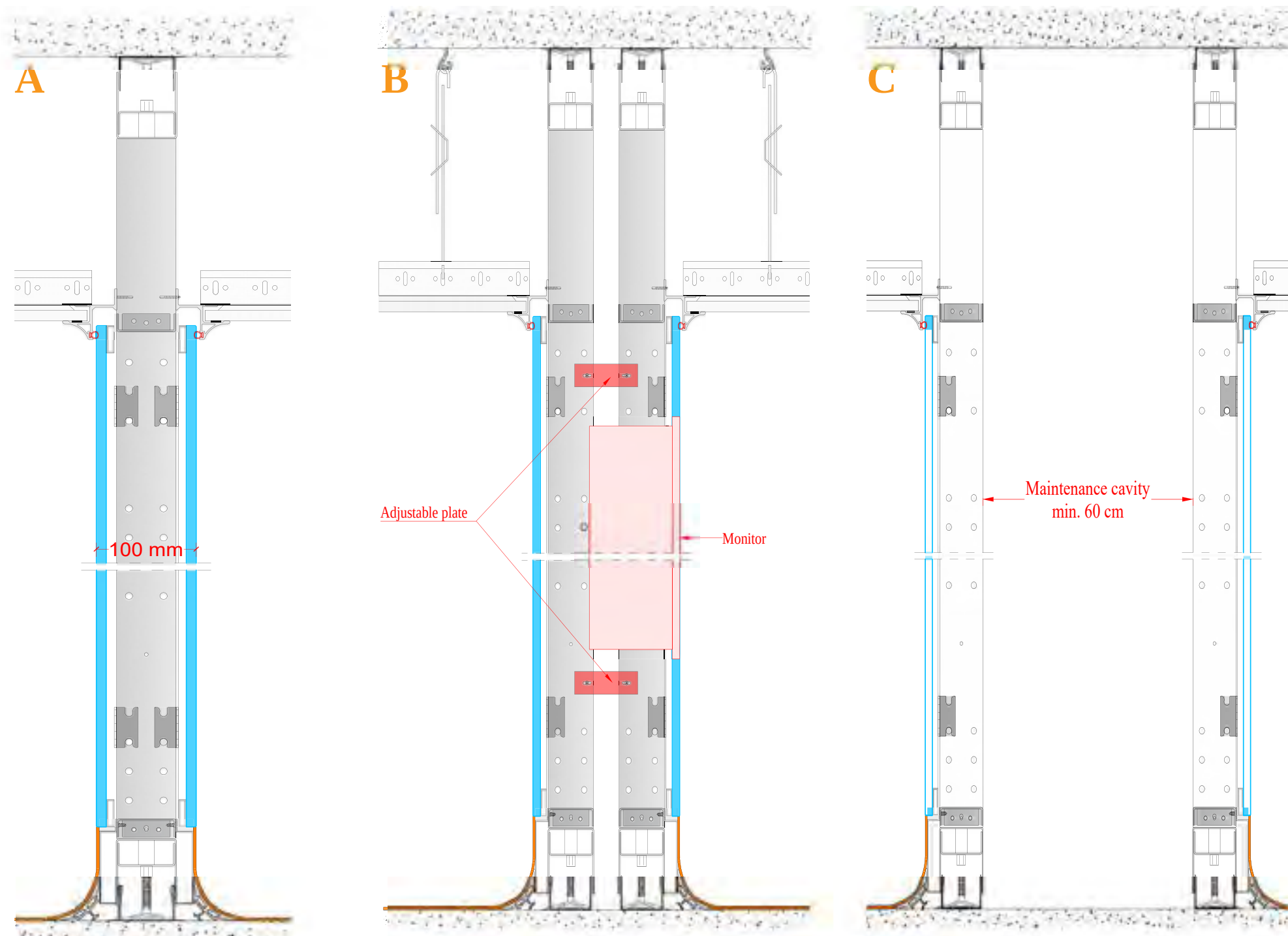
SEALING WITH NON-TOXIC LIQUID SILICONE

When the customer prefer a different solution, it is possible to seal the panels using a layer liquid colored or transparent of silicone. This solution allows a perfect sealing but prevents all the panels to be removed very quickly for any maintenance

- Quality seal of the IVD (Industrial association for sealants, registered society), tested by the ift Rosenheim (Institute of window engineering, registered society)
- According to regulation (EG) Nr. 1907/2006 (REACH)
- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
- Fulfills DGNB-characteristics 06 (DGNB e.V. = German Organisation for sustainable building)
- French VOC-emission class A+
- Certified according to GOS



OPEN SPACE SOLUTIONS

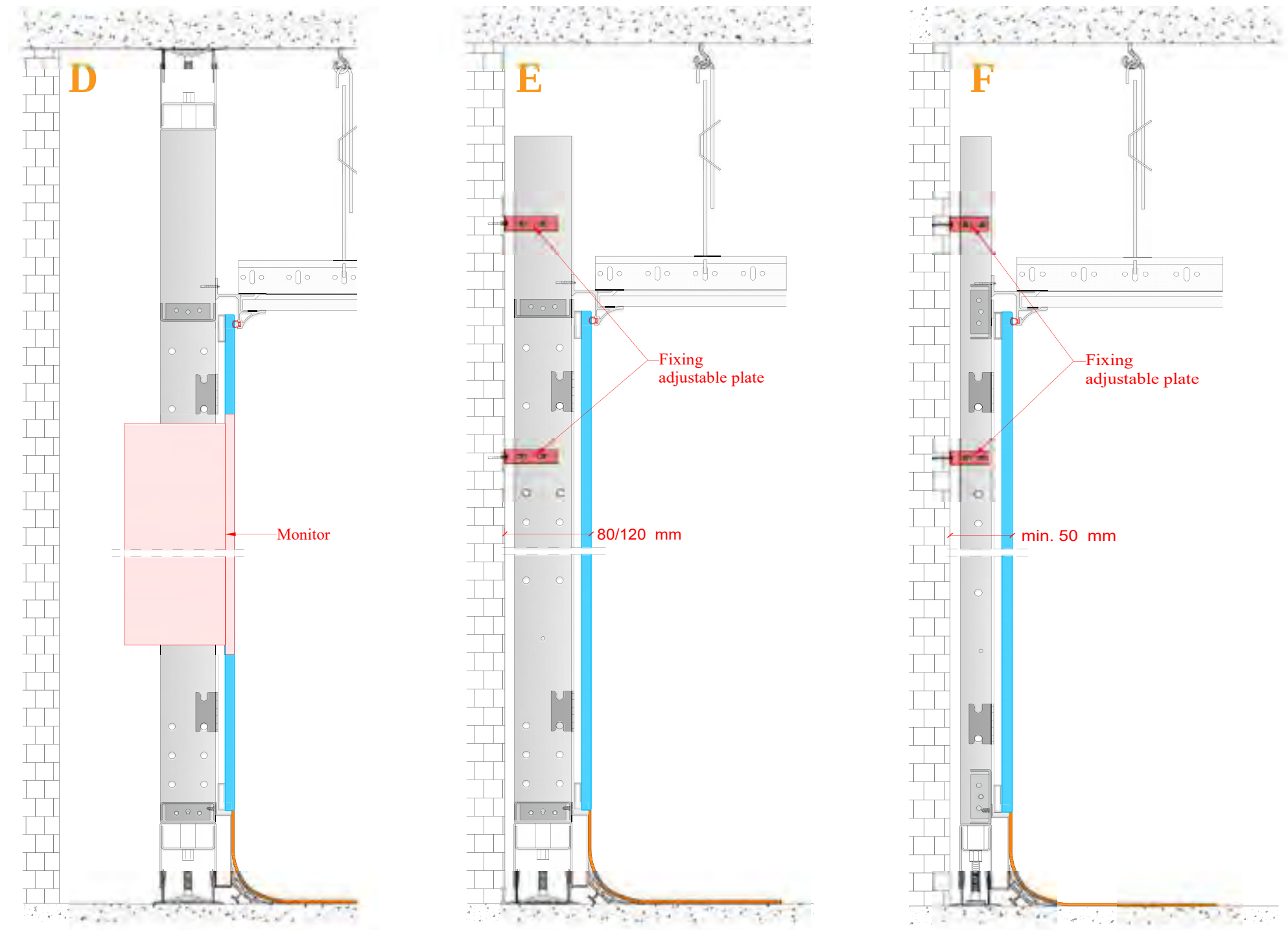


Single structure solution to be used in open space area when integrated equipments have limited thickness (less than 80 mm).

Double structure solution conceived to be used in open space area when integrated equipments have very important thickness (more than 80 mm).

Double structure solution with maintenance cavity. This solution to be used in open space area allows a very easy maintenance with access from the external corridor without any contamination of the internal operating room.

CLADDING SOLUTIONS



Single panel solutions to be used as a cladding of existing walls. This cladding solution, fixed from floor to ceiling and independence from the walls behind, allows the integration of any kind of equipments even with very important thickness (more than 80 mm).

Cladding solution with standard section fixed to existing wall. This solution can be used when the integrated equipments have limited thickness (less than 180 mm) and you have to increase the internal space of the room.

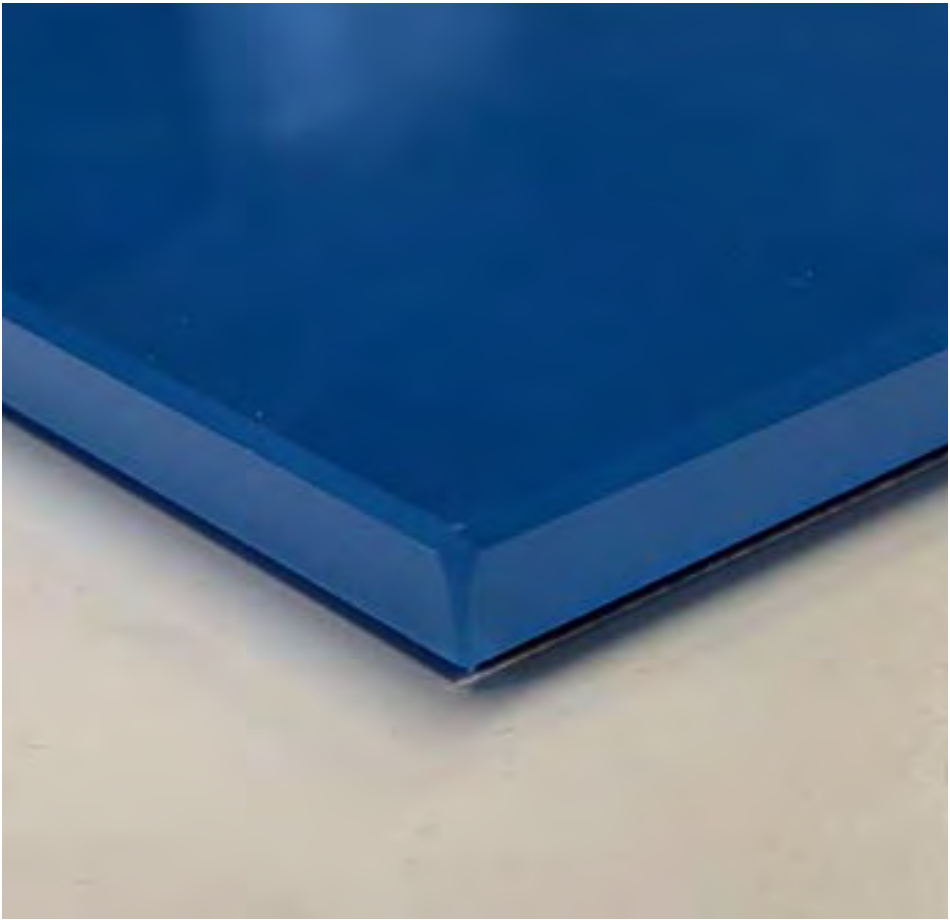
Cladding solution with minimal structure fixed to existing wall. This msolution can be used when there is no integration in the wall and you have to optimize as much as possible the internal space of the room.

GLASS PANELS

- Toughened back-painted glass panels 10mm thick with aluminum perimeter frame dim. 30x8mm 1,5mm thick glued on the back of the glass with a single component adhesive.
- Total thickness of the panels: 18mm
 - All panels with height up to 3000 mm can be produced in monolithic pieces. For higher rooms, they have an interruption at about h 2120 mm from the floor.
 - The panels are supplied with pre-cut holes for the housing and installation of any apparatus or equipment provided.
 - Glass panels are heat strengthened in compliance with EN 1863-1 and thermally toughened in compliance with EN 12150-1. The basis glass used for production is float glass in conformity to EN 572-1 & 2.
 - The colored glass panel is obtained by the application of enamel paint on a glass substrate (in accordance with EN 572-2).
 - Coupling system to the main frame with hooks, without screws, which allows to easily disassemble every single panel and inspect the wall.

The glass, between all the specifically chosen materials for O.R. paneling, is one of the best material for the following reasons:

- Easier to clean;
- 99,99% (log 4) bacterial activity reduction through O.R. standard cleaning procedure;
- Green and 100% recyclable;
- Long lasting material;
- Bump and scratch free;
- No restoration or re-painting needed life-long;
- Non-combustible mineral.



ANTIBACTERIAL GLASS

AntiBacterial Glass™ by AGC Glass Europe is a major innovation in the world of glass design. The antimicrobial action of the silver ions inside the glass eliminates 99.9% of all bacteria that form on its surface whilst also preventing the spread of fungi. This remarkable property makes it perfect for places where strict hygiene is a must.

The process developed and patented by AGC GLASS EUROPE involves diffusing silver ions into the upper layers of the glass: the ions interact with bacteria and destroy them by disabling their metabolism and disrupting their division mechanism.

AB Glass eliminates micro-organisms as soon as they come into contact with the surface of the glass. Its action is continuale. The silver infused into AntiBacterial Glass during the manufacturing process is released in sufficient quantities to guarantee a bactericidal and fungicidal effect. Accelerated ageing tests have shown that the action of AB Glass is long-lasting and does not deteriorate over time.

AB technology has undergone extensive testing on a representative range of bacteria and fungi. The results showed a drastic reduction in the initial bacterial concentration as well as a cessation of fungal growth.

The tests were conducted by independent laboratories. The methodology used and the full test results were validated, based on European (EN 13697 - EN1276 - EN1650) and Japanese (JIS Z 2801-2000) standards, by the Laboratory of Pharmaceutical Microbiology and Hygiene at the University of Brussels (Université Libre de Bruxelles – ULB) Institute of Pharmacy.

- AntiBacterial Glass is:
- bactericidal on vegetative forms of germs, i.e. it eliminates over 99% of bacteria that form on the glass;
 - fungistatic, i.e. it inhibits the growth of fungi.

It therefore enhances hygiene in the places where it is fitted and is an effective weapon against certain types of bacteria responsible for nosocomial infections such as E. Coli and S. Aureus (golden staphylococcus).

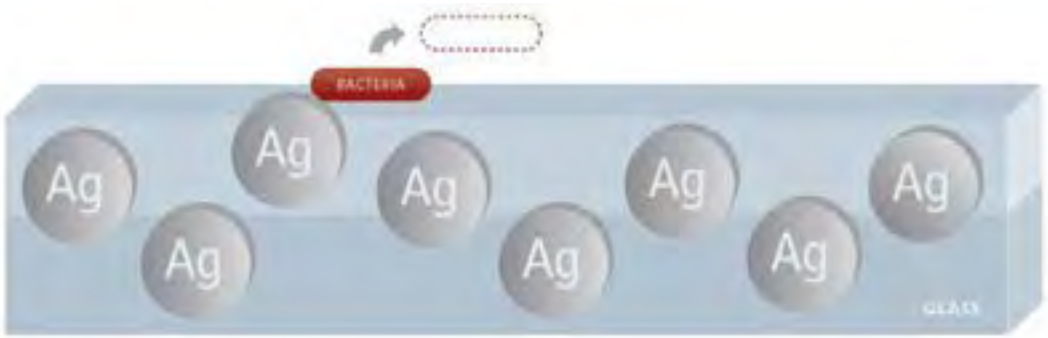
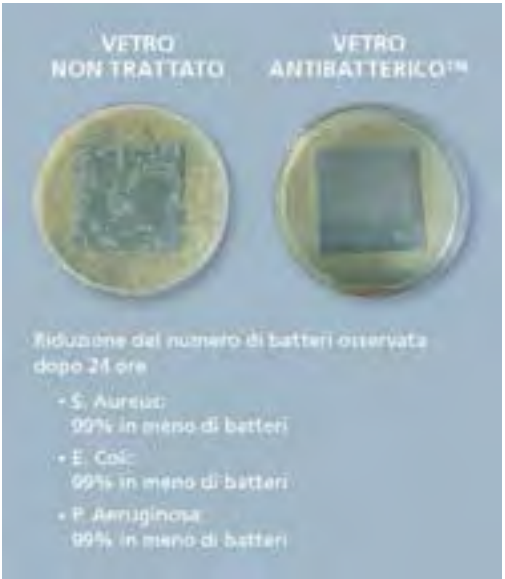
IMPORTANT NOTE: additional tests involving Aspergillus Niger showed AB Glass to have a long-term fungicidal effect on this type of fungus.

AntiBacterial Glass is not self-cleaning and should be cleaned like any other glass.

Tests have been conducted to measure the impact of cleaning agents such as bleach, Glassex and Mr. Propre on AntiBacterial Glass. These cleaning products (particularly those used in hospitals such as Umonium and Incidin Plus) do not inhibit the glass’s antibacterial performance.

The silver ions responsible for the antibacterial action of AB Glass are present in very low concentrations and are not harmful to humans. Silver has been used since antiquity for its antimicrobial properties.

NB: AB Glass cannot be toughened as this might diminish its antimicrobial effect. AntiBacterial Glass is particularly well suited to places that are subject to specific hygiene requirements such as: hospitals, Operating rooms, Isolation rooms and Sterilisation rooms.



ANTIBACTERICAL TRATEMENT GUARANTEED FOR 10 YEARS

**CLINIQUE CASABLANCA AIN BORJA -
AKDITAL HOLDING**
Casablanca (Morocco)

- Modular wall system
- Antibacterial glass panels
- Back printed glass panels
- Stainless steel connect panels
- Glass hermetic automatic doors (sliding)
- Air intake grids
- Hermetic ceiling + hermetic light
- Laminar airflow ceiling
- Stainless steel surgical cabinets
- Surgical control panels
- OT clock
- PACS workstation with 43" monitor
- Led x-ray viewer
- Flooring
- External cladding in HPL panels

HIGH PRESSURE LAMINATE - HPL PANELS

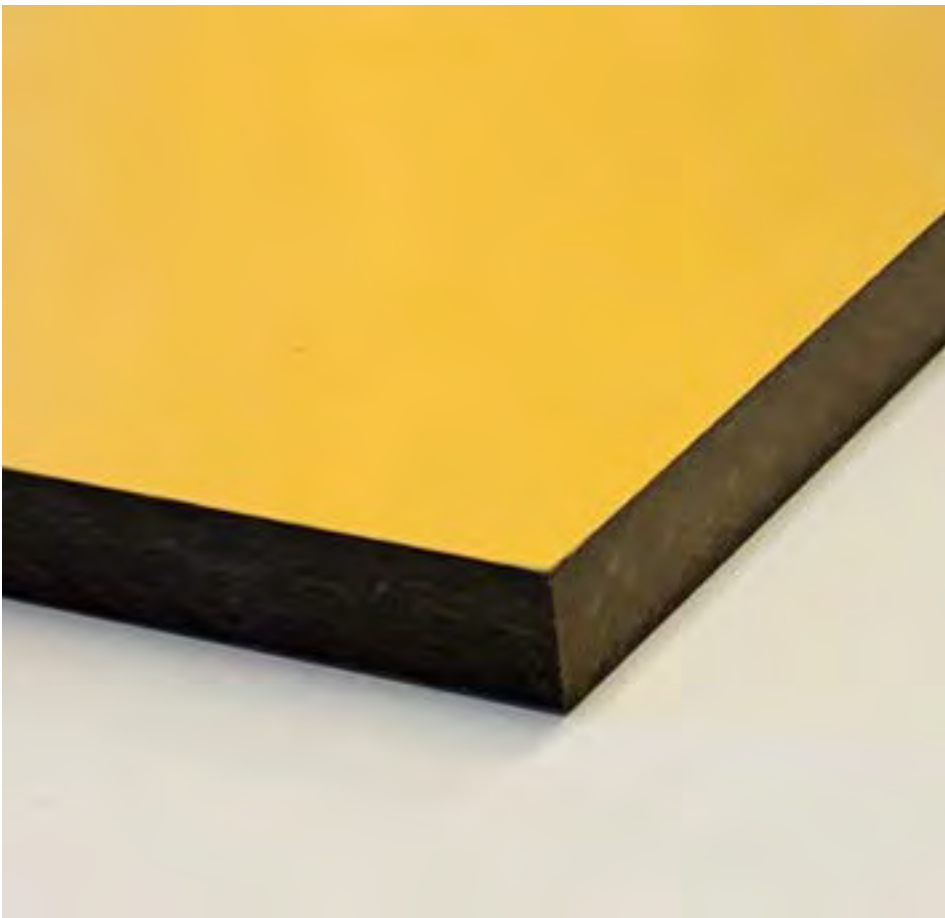
The HPL panel is formed by an HPL sheet with a thickness of 10 mm, it is glued on the perimeter to a rectangular section frame of extruded aluminum dim.40x10 mm, 1,5 mm thick.

On the vertical profiles of the frame are fixed the hooks fix the panels on the supporting substructure.

The board is supplied polished and already ‘cut to size’ with beveled edges. Any holes on the panels can be made in factory with numerical control machine or, if it is necessary, even on site using suitable tools.

The HPL laminate is the result of a procedure, which joins layers of cellulose fiber material soaked with thermosetting resins by means of high pressure and high temperature. The result is a compact, homogeneous, non-porous, highdensity and extremely scratch-proof and shockproof material.

HPL panels are available with decorative motifs to guarantee highly aesthetic results.



ANTIBACTERIAL HPL PANELS

- SELF-SUPPORTING PROPERTIES
- EXCELLENT PERFORMANCE TO FIRE, SMOKE AND TOXIC GASES
- ENVIRONMENTALLY FRIENDLY
- MECHANICALLY STURDY
- HIGH RESISTANCE TO WATER AND STEAM
- EASY TO CLEAN
- EXCELLENT HYGIENIC PROPERTIES
- WIDE RANGE OF COLOURS AND DESIGNS
- DIMENSIONAL STABILITY AND FLATNESS
- ANTI-STATIC
- EASILY MACHINED
- HIGH RESISTANCE TO CHEMICALS AND ORGANIC SOLVENTS

Integrated within the material in order to assure antibacterial protection throughout its lifecycle, this biocidal additive does not influence the technical and aesthetic performances of our HPL and Compact products. It is a technological innovation that Polyrey has been able to implement thanks to an integrated manufacturing process, which includes the production of our own resins.

The silver ions encapsulated in glass balls are activated when entering into contact with humidity. They kill surface bacteria and block the cell division process, thus reducing bacteria proliferation. The Ag+ ion-based Sanitized® treatment is a non-migratory inorganic solution that is not modified with time. Unlike synthetic and organic antimicrobial substances, such as triclosan, silver is a non-toxic molecule.



ANTIBACTERIAL TRATEMENT GUARANTEED FOR THE ENTIRE LIFE OF THE PANELS

SIMEULUE HOSPITAL

Sinabang City - Aceh Province (Indonesia)

- Modular wall system
- HPL panels
- Stainless steel hermetic automatic doors (sliding)
- Hermetic ceiling
- Hermetic ceiling lights
- Air intake grids
- Stainless steel surgical cabinet
- Stainless steel pass-through box
- Led x-ray viewer
- OT clock

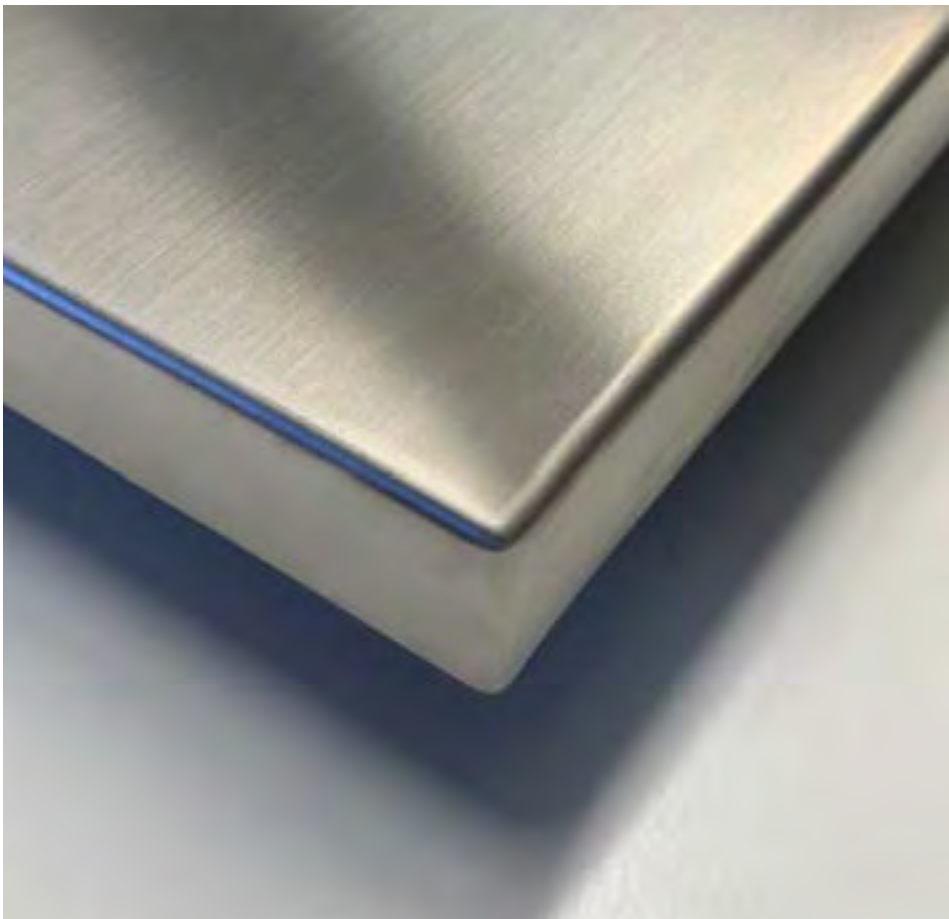


STAINLESS STEEL PANELS

- Sandwich panels composed of a AISI 304 stainless steel sheet (thickness 0,8 mm or 1mm) and stiffening counter-plating made of sheets of composite material (thickness 12,5mm), bonded with polyurethane adhesive.
- Total thickness of the panels: 20mm
- Bent and swaged edges, smoothed corners.
- All panels with height up to 3100 mm can be produced in monolithic pieces. For higher rooms, they have an interruption at about h 2120 mm from the floor.
- The panels are supplied with pre-cut holes for the housing and installation of any apparatus or equipment provided.
- Coupling system to the main frame with hooks, without screws, which allows to easily disassemble every single panel and inspect the wall.

FINISHES AND COLOURS

- The panels may have different finish grain or may be varnished.
- Coating with epoxy-polyester powder or antimicrobial protection.
- Colours in accordance to RAL chart or customized ones.



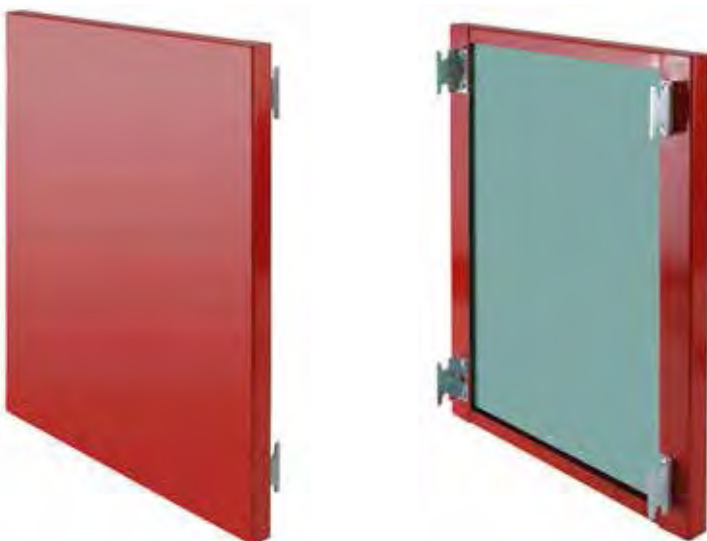
POWDER COATED ANTIBACTERIAL TREATMENT

In the case of powder paints, the antimicrobial agent is added in the initial phase, together with the other raw materials. Although the silver ion has a diameter extremely small, of about 100 nm, the antimicrobial action of powder coatings that contain it is carried out effectively, avoiding the proliferation of bacteria on the painted surface.

To evaluate whether a powder paint has an efficient antimicrobial activity, on based on the **Japanese Industrial Standard JIS Z 2801**.
A painted sample of 5x5cm, sterilized with 70% ethanol solution, comes covered with 400 µl of bacterial culture (Escherichia Coli and Staphylococcus Aureus). The sample is placed in a humidostatic chamber at 37 ° C for 24 hours, after which yes count the bacteria still alive, obtaining the CFU (Colony Forming Units), an indicator of the bacterial population

Test results on:

Bacterium: Escherichia Coli
Initial number of living bacteria: 1,500,000
Bacteria after 24h: <100
% Reduction bacterial count> 99.999%



KAWALI HOSPITAL

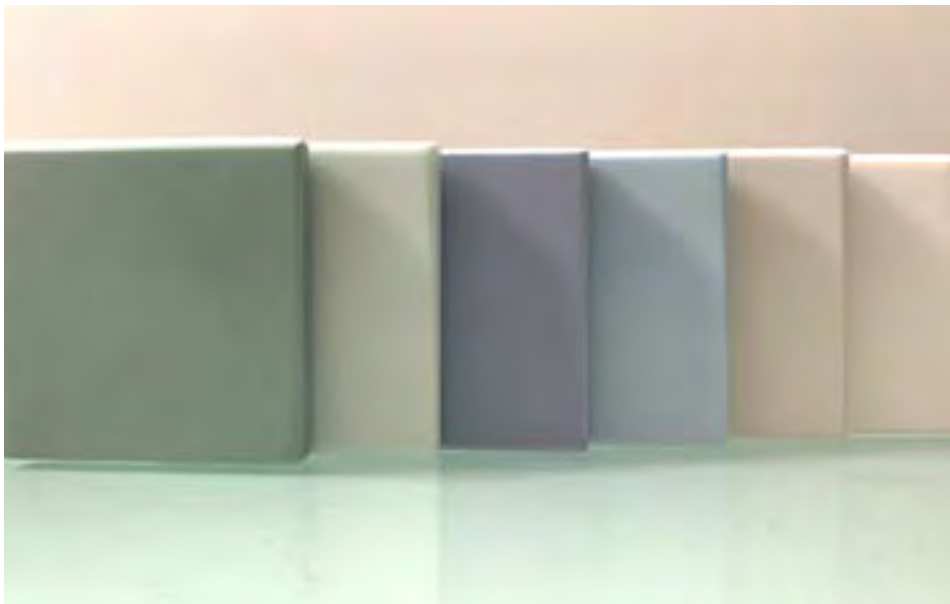
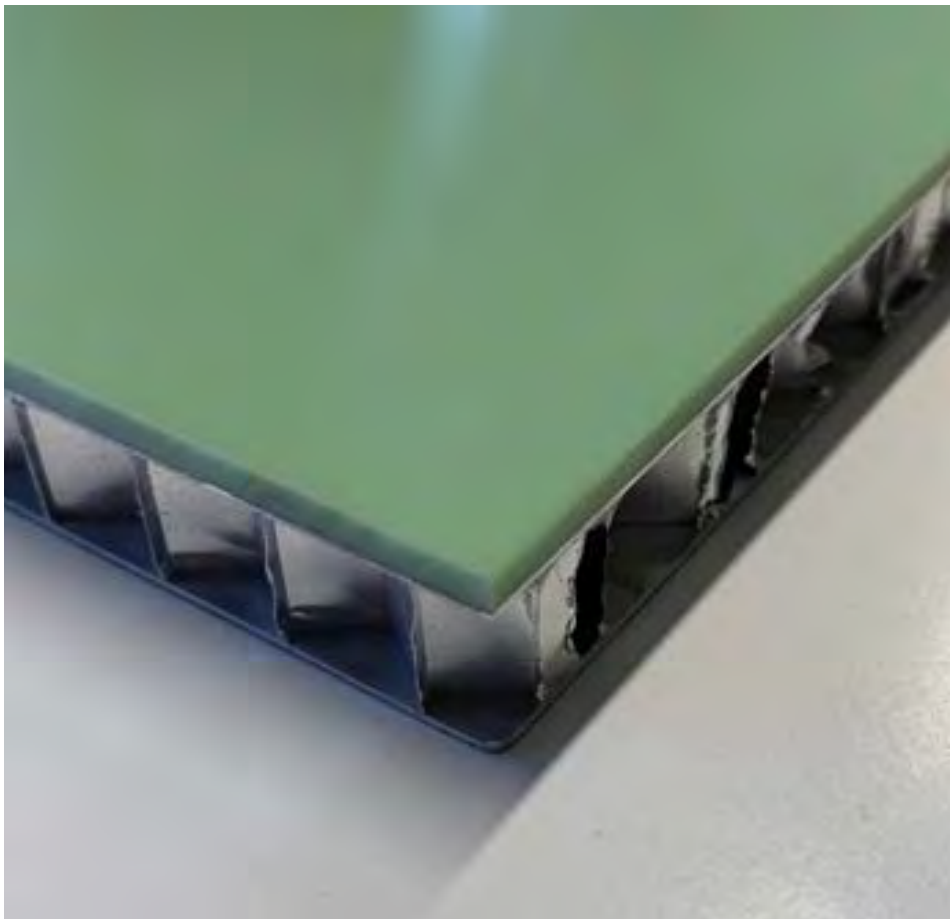
Ciamis - West Java (Indonesia)

- Modular wall system
- Powder coated stainless steel panels (antibacterial treatment)
- Back printed glass panels
- Stainless steel hermetic automatic doors (sliding and hinged)
- Hermetic ceiling
- Hermetic ceiling lights
- Stainless steel surgical cabinets
- Stainless steel pass-through box
- Surgical control panel
- OT Clock
- Led x-ray viewer



SOLID MINERAL SURFACE - SMS PANELS

- Monolithic Solid Mineral Surface panels 3mm thick glued on aluminum honeycomb panels 16mm thick.
- Total thickness of the panels: 19mm
- All panels with height up to 3000 mm can be produced in monolithic pieces. For higher rooms, they have an interruption at about h 2120 mm from the floor.
- The panels are supplied with pre-cut holes for the housing and installation of any apparatus or equipment provided.
- The SMS panels are a non-porous, infection-controlling surfaces naturally inhibit the growth of dangerous bacteria and pathogens.
- Non-porous: extremely hygienic and easy to clean.
- It can repeatedly be repaired and restored for extended life.
- Coupling system to the main frame with hooks, without screws, which allows to easily disassemble every single panel and inspect the wall.



ANTIBACTERIAL SMS PANELS

In the operating room, in the awakening areas, radiology, as well as in every other part of a hospital, hygiene is of paramount importance. Still occur each year countless cases of patients who contract infections during their stay in the health institutions. The hygienic and antibacterial properties of SMS can contribute significantly to the reduction of the spread of infections and communicable diseases.

Leading features

- Hygienic
- Antibacterial
- Easy to clean and easily disinfected
- Compact in its whole thickness, non-porous
- Available in large slabs
- Jointed with hygienic and inperceptible seams
- Heat and stains resistant
- Anti-bacteriological contamination chemical agents resistant
- Laboratory substances and dental resins resistant
- Self-extinguishing



**Plastics-Measurement of antibacterial activity on plastic surface
ISO22196:2007**



**Azienda Osp. Universitaria
'San Luigi Gonzaga'**

Orbassano - Turin (Italy)

Materials summary comparation

	GLASS	HPL	STEEL	SMS
Fire rating	A1	B-s1, d0	A1	B-s1, d0
Recyclability	●	● Not recyclable	● Backside plasterboard panel must be removed (not recyclable)	● Not recyclable
Colors choice	●	●	●	● Few colors available
Color stability	●	●	● The painted external surface can change the intensity of the color after many cleaning treatment	●
Long lasting printing	●	●	● The printed external surface can change the intensity of the color after many cleaning treatment	● The printed external surface can change the intensity of the color after many cleaning treatment
Impact resistance	●	●	● Easy to dent	●
Scratch resistance	● Difficult to scratch	● Difficult to scratch	● Difficult to scratch	● Difficult to scratch
Repairability	● To be changed	● To be changed	● Dent not repairable Scratch repairable	●
Concentrated light reflection	●	●	●	●
Antibacterial version with warranty	● 10 years warranty	● Guaranteed for the entire life of the panel	● Surface treatment only	● Surface treatment only



BURN AND TRAUMA HOSPITAL
Peshawar (Pakistan)

- Modular wall system
- Back painted glass panels
- Back printed glass panels
- Stainless steel sliding automatic door
- Stainless steel hinged manual door
- Smart glass windows for doors
- Hermetic ceiling
- Hermetic ceiling lights
- Stainless steel surgical cabinets
- Led x-ray viewer

OTHER WALL OPTIONS

LED RGB

RGB Multicolor and dimmable led light bands designed to perfectly fit into the planar surface of the side O.R. walls.

This system guarantees optimal efficiency in terms of easy cleaning and perfect custom ambient illumination.

The possibility to customize the color and the quantity of the ambient light gives to all the surgical team members a better place to work.



DIGITAL BACK-PRINTING WITH CERAMIC INKS

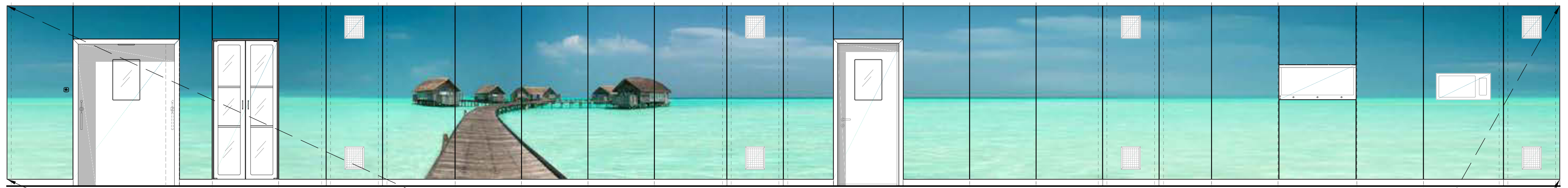
Glass panels can be back-printed with any hi-res digital picture. This solution provide a giant step forward for a better well-being kind of working place.

Our printing technology, which uses ceramic inks, allows maximum adhesion to the print media. The glass is tempered only after printing to create a monolithic surface.

Digital printing can be performed on both glass and HPL surfaces. This feature is a great benefit to improve the work place environment.

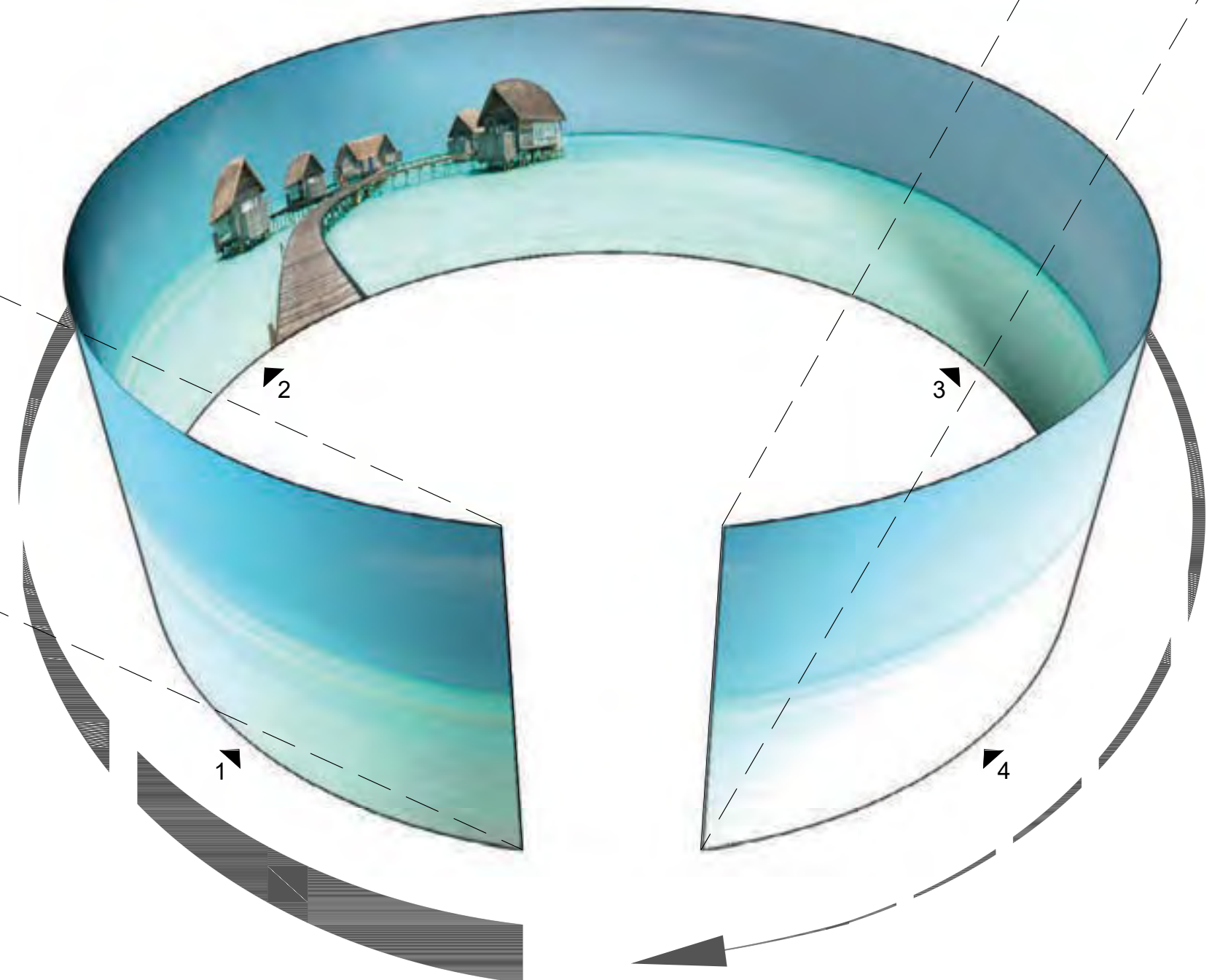
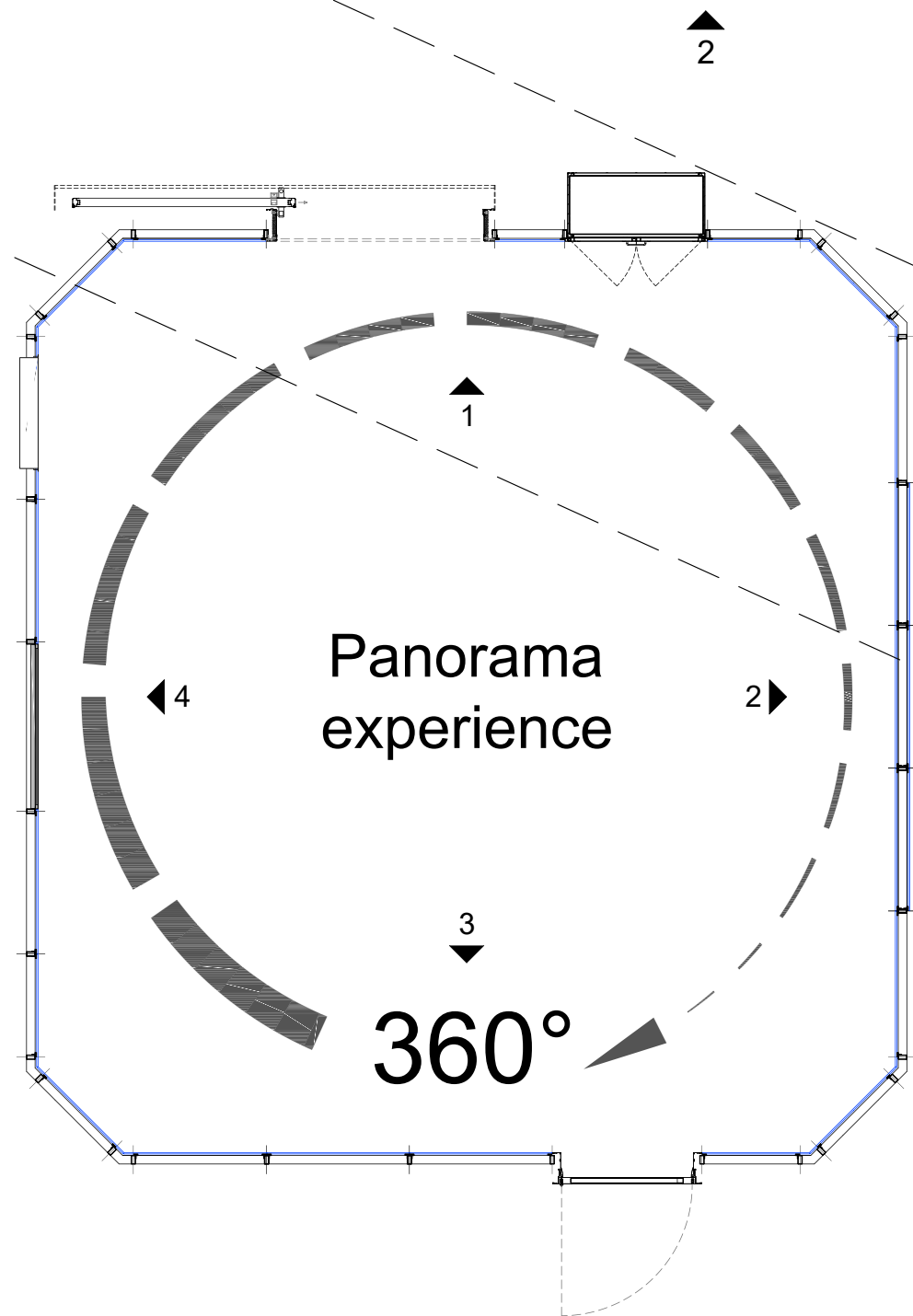






The long experience and the knowledge gained in the production of glass partitions, the Adam technical team allow us to create today a unique and incredible ambient where all the glasses are printed to create a 360° panoramic image.

The very high quality of our printing process on glasses combined with the very competitive price, will give the possibility to all our client a personalized and extreamly relaxing room keeping ale the integrations and technical advantages of our Salus Modular System.



WALL INTEGRATIONS

CONNECT PANELS

Our Connect panels are designed and built to integrate all kind of utility.
They are stainless steel made to allow future integration, guarantee maximum linearity and cutting edge aesthetic.
They are designed to be easily disassembled for quick and easy maintenance.

Connect panels can be integrated with the following utilities:

- Electrical outlets;
- Medical gas outlets;
- Data outlets;
- Switches;
- All kind of controllers.



DIGITAL CLOCK AND TIMER

The digital clock and timer is a complete microprocessor-based device that displays both time of day and elapsed time information.
The clock has a dual-row display with large, red LED characters, easily read in high ambient light. All features, as well as the device setup, may be carried out with the on board push buttons or on an optionally connected clock remote.



Digital clock



Analog clock and timer



Digital clock connected to control panel

CONTROL PANEL

In terms of the human/machine interface, alarm indicator and operator panels play a vital role. Their task is to take system information and transform it into clear instructions particularly in the event of critical operating situations.

The flexible TCP Touch Panel provides a solution that meets the demands of both modern medical equipment and industrial and functional buildings.

In the hospital environment, they can be programmed to provide clear, user friendly information with respect to critical operating theatre systems.

Clinical staff is presented with all controls and indicators at their fingertips allowing them to maintain the optimal theatre environment without disruption to medical procedures.





System enables medical staff to have a view over many controls, even though all can not be demonstrated on the single page. To reach next page with another vital data and settings, important for the medical environment, the menu can be simply moved left or right.



In order to enable the fastest control over gases, this SCP is showing the gas situation constantly. The current gas situation is showed in the quick info window. All additional data and all the necessary details that enable medical staff to follow, monitor or control gases, show up by pressing SET button.



Quick switches enable the medical staff to turn on and turn off the lights. Other functions as dimming, choosing colours, switching among the groups, settings and selecting presets can be set in the pop-up window that shows up by pressing SET button.



Fast control enables the view over the temperature, humidity and ventilation settings. By pressing SET button the pop-up window shows that enables medical staff further settings, presets and additional information

PACS DIGITAL VIEWER MULTI-CONSOLE (PC INTEGRATED)

The next generation MULTI-CONSOLE to manage your growing information needs.

The glass front version of the MULTI-CONSOLE provides a comprehensive solution to your O.R. work-flow needs while meeting the highest hygienic standards and without compromising on operator ease of use.

- Tailored to fit your needs with:
- Optional display sizes and technologies
 - A variety of input- and output add-ons
 - A multitude of finishes and colors
 - All contained in-wall or on-wall
 - Zero footprint deployment



Medical keyboard



TECHNICAL DATA

- 43” WORK STATION**
43” professional LED LCD
24/7
1 x 15-pin VGA
3 x HDMI
view angle 176°
contrast 3000:1300 cd/m2
Full High Definition LCD
1920x1080
- PC**
Audio IN and OUT,
Intel HD audio
4×USB 3.0
Intel Pro 10/100/1000 Ethernet
4k Support
1.2Intel HD Graphics 5500
2×DDR3L 1333/1600 SO-DIMM, Dual-channel
2.3 GHz Dual Core,
3MB CasheIntel® Core™
i5-5300U v Pro Processor

- WALL BUTTONS INPUTS/OUTPUTS**
Medical Grade Keyboard with trackpad
ON/OFF switch button
2x USB input
1xHDMI input
1x BNC input

ADAM work station attempt to satisfy information managing needs by enable the right information in right place at right time.

This device enables medical personnel to install all their software required (like PACS, RIS, HIS or workflow software). ADAM work station consists of high-performance computer, monitor that is installed on the wall and protected by glass panel, and medical keyboard. ADAM Work station is equipped with USB and HDMI access or other required installation.

The advantage of ADAM work station is it's high quality materials and sustainable products. It also offers flexibility in wide range: it fits the space by selecting among different sizes, it fites the budget by selecting the most suitable set and it fits the content since it enables to suport all the software required and necessary for fluent workflow.



Usb and data sockets

LED X-RAY VIEWER

High-quality film viewers with collimation and luminous density control represent indispensable tools for the radiologist in his efforts to reliably evaluate analogue radiographs.

The adjustable and easy to move shutters fitted between an external scratch-proof mineral clear glass pane and an internal flashed glass pane of high-grade acrylic ensures sharp-edge collimation even of small image areas.

The collimation is combined with accurate luminous density to achieve a marked improvement in detail recognition.

It is available in different sizes.

The standard viewing area sizes are:

- 40 x 43 cm 72 x 46 cm
- 80 x 43 cm 105 x 46 cm

The viewers are in compliance with DIN 6856-1.



OPERATING THEATRE CABINETS

- Smooth, Ultra-Clean Surfaces Eliminate Germ Traps, Simplify Cleaning and Disinfection;
- Seamless design eliminates cracks for easy cleaning, sterilization;
- No-lip design simplifies material transfer by eliminating clearance restrictions;
- Electropolished stainless steel chamber and hardware (SS aisi 304 or 316) won't shed particles, resists disinfectants and other chemicals.



PASS-THROUGHT WINDOWS

Smooth, Ultra-Clean Surfaces Eliminate Germ Traps, Simplify Cleaning and Disinfection.

Seamless design eliminates cracks for easy cleaning, sterilization.

No-lip design simplifies material transfer by eliminating clearance restrictions.
Electropolished stainless steel chamber and hardware (SS aisi 304 or 316)
won't shed particles, resists disinfectants and other chemicals.

OT integrated windows can be built with the 'smart-screen' feature which enables the user to get the glass 'blind' as needed.



PASS-THROUGHT CABINETS

The System is complemented by many accessories, between them we find the pass-through cabinets.

Pass-through cabinets are very useful to maintain the highest asepsis inside the operating theatre area.

They are usually built in stainless steel, but they can be painted to adapt to the ambient color.

They are electrically interlocked and the two doors, the inside and the outside one, can be opened one at a time.



IPS

These panels are specific for the supply of electrical systems in medical areas, in accordance with the regulation CEI 64-8. They guarantee total protection from macro and micro shock through electrical segregation between utiliser and electric net.

The continuity of service is an essential need especially in the surgical wards, anesthesia or intensive care units, as in the dentist's offices or in the laboratories for analysis. The accidental suspension of the activity could affect the result of the operation or even the health conditions of the patient, for this reason the use of special protection systems is indispensable in order not to allow the automatic interruption of the electrical circuits at the first breakdown. For these circuits it is necessary to adopt the supply through the isolation transformer as a protection system against accidental contacts danger.

These panels, as for their executive and electrical features, can be used in medical spaces in accordance with the regulations:

- IEC 60364-7-710
- CEI 64-8/7 CAP.710
- CEI EN 61558-2-15



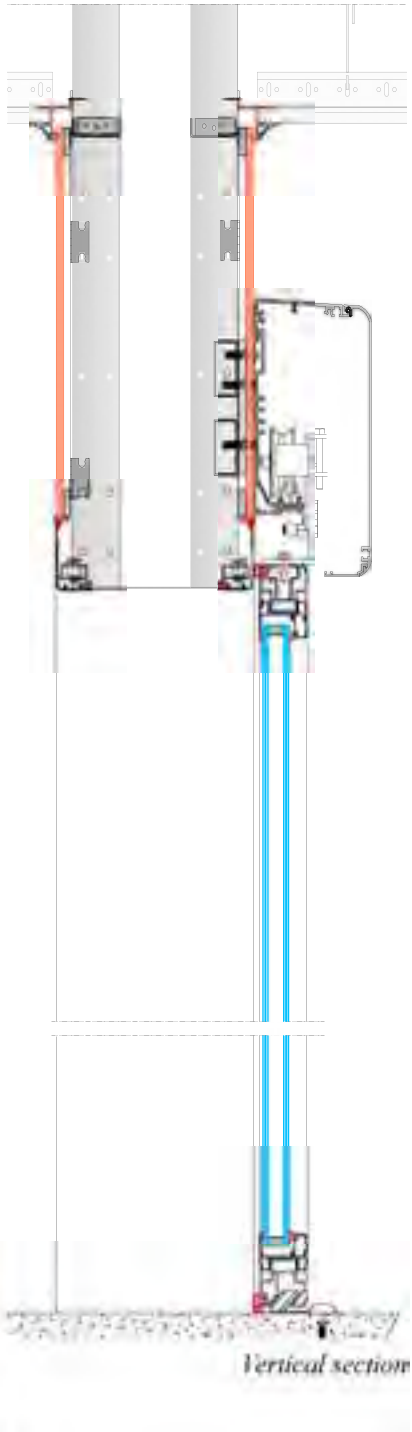
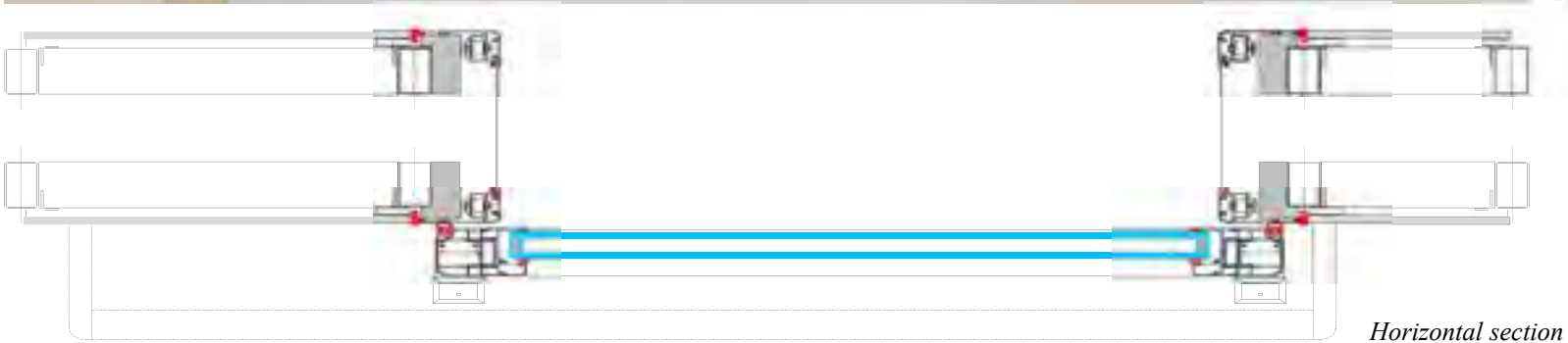


**CENTRE INTERNATIONAL
D'ONCOLOGIE DE CASABLANCA**
Casablanca (Morocco)

- Modular wall system
- Antibacterial glass panels
- Back printed glass panels
- Stainless steel connect panels
- Glass hermetic automatic doors (sliding)
- Air intake grids
- Hermetic ceiling + hermetic light
- Laminar airflow ceiling
- Stainless steel surgical cabinets
- Surgical control panels
- OT clock
- PACS workstation with 43" monitor
- Led x-ray viewer
- Flooring
- External cladding in HPL panels

DOORS

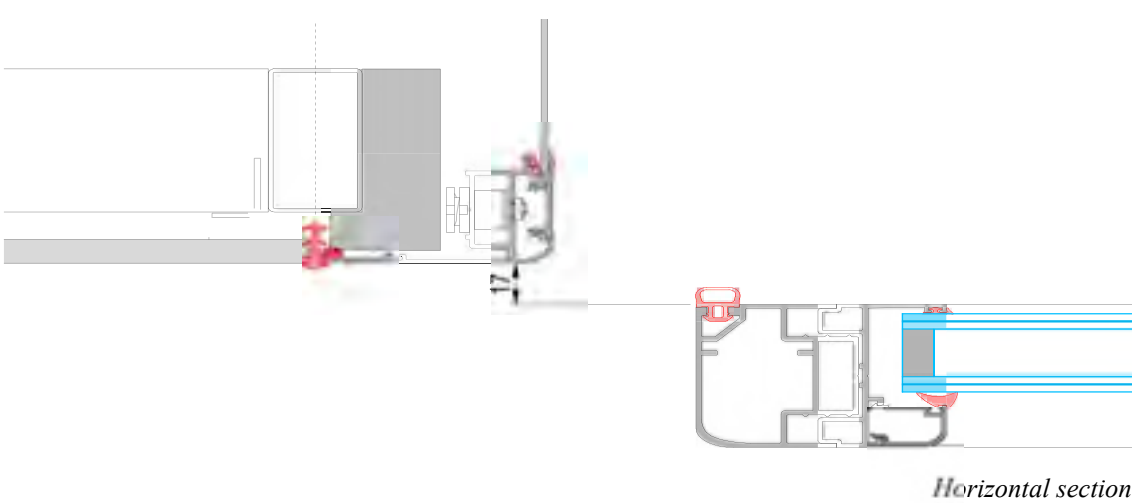
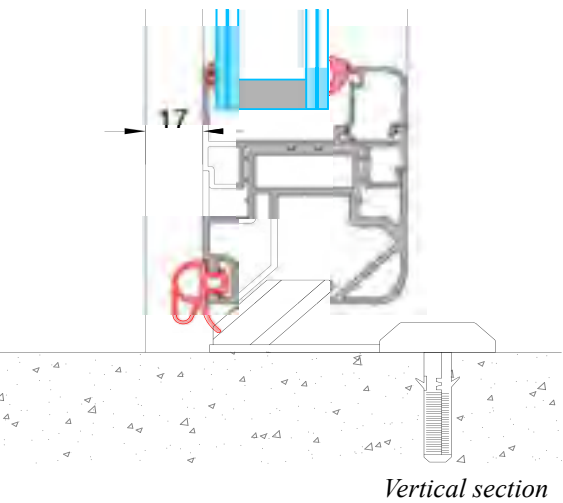
AUTOMATIC HERMETIC SLIDING DOORS



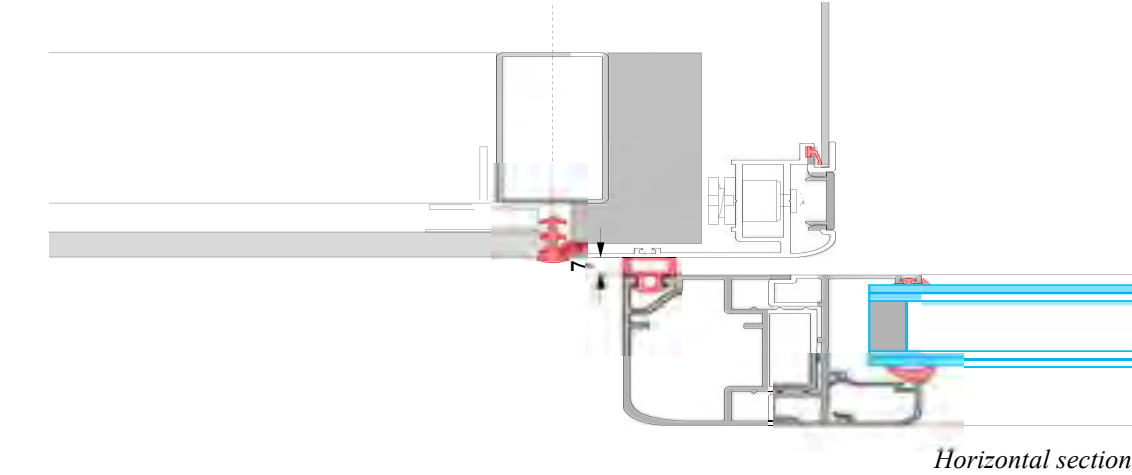
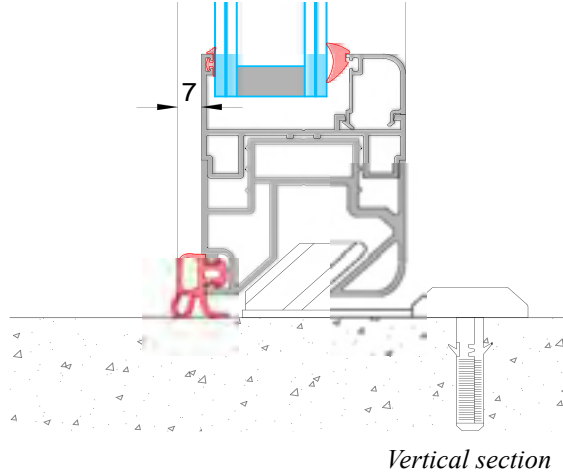
The total control of internal environment of the Operating room is a concept essential and mandatory and for this reason the system of motorized automatic sliding doors provided from Adam guarantees the achievement of the maximum level of tightness. Through a system of seals and gasket and using an misaligned sliding track, we allow to our door to push all the gasket against the wall and the floor.

- The big advantages of our hermetic system :
- 1. total control of the air circulation inside the room;
 - 2. total control of the antibacterial internal area without any possible contamination from outside;
 - 3. absolute acoustic isolation of the room.

DOOR OPENED



CLOSED DOOR - TOTAL HERMETIC STATUS



AUTOMATIC SLIDING DOORS



Door with switchable LCD glass blind



Door with switchable LCD glass transparent



Infrared radars



Antibacterial security handle



Hermetic gasket for automatic sliding door

AUTOMATIC SLIDING DOORS



Doors display



Push buttons



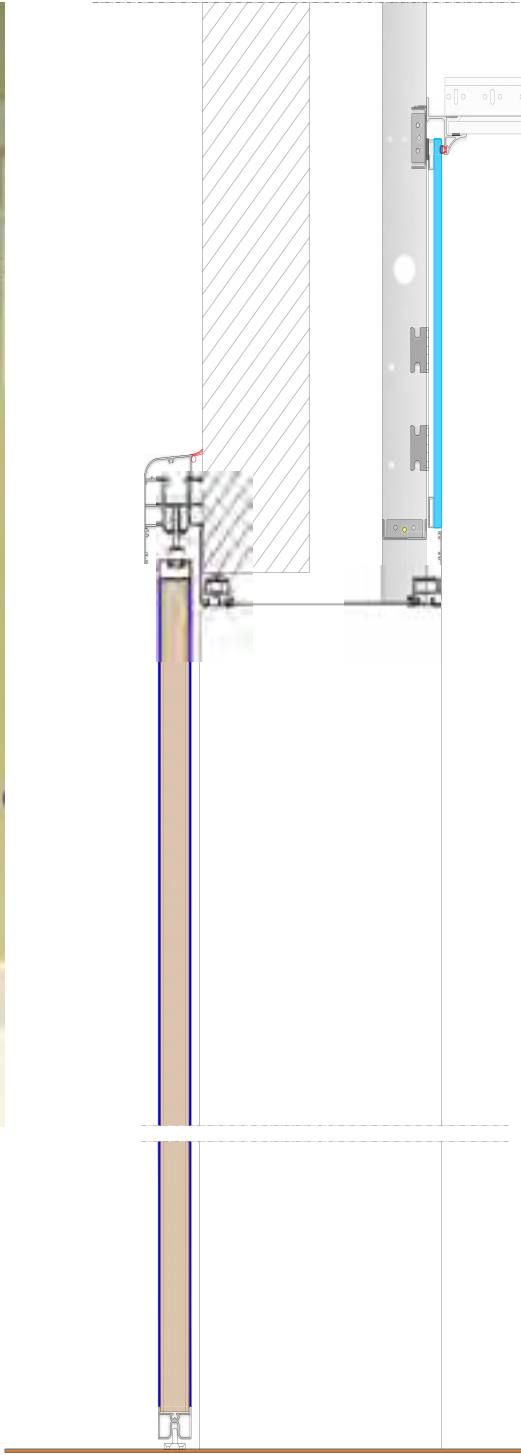
Touchless open button

MANUAL SLIDING DOORS

In the areas outside the Operating room we can supply manual sliding doors with different materials like stainless steel, high pressure laminate (HPL), glass and solid mineral surface (SMS).



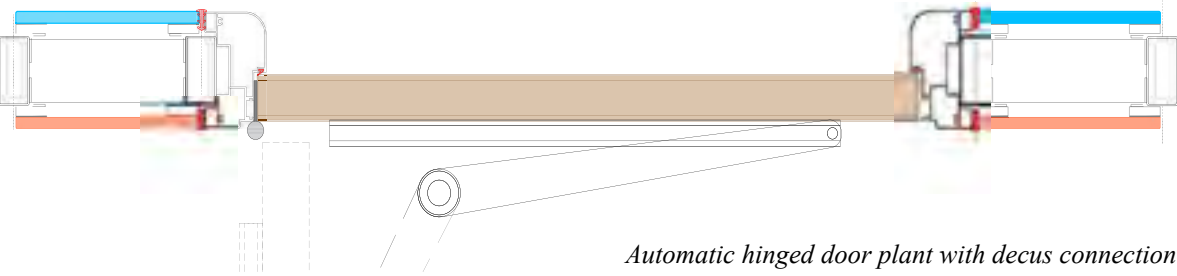
HPL manual sliding doors plant



HPL manual sliding doors vertical section

AUTOMATIC HINGED DOORS

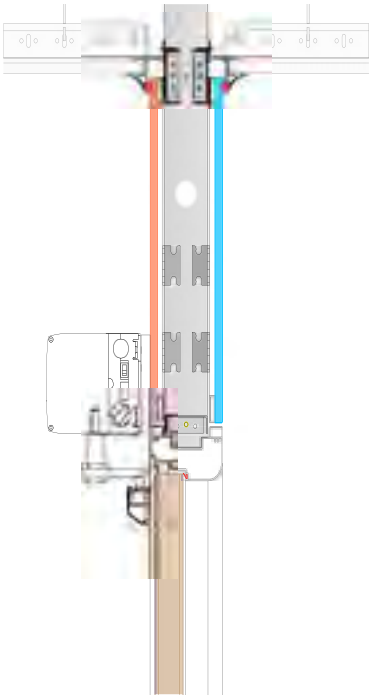
Where sliding doors cannot be used, we prepose a solution of hinged automatic motorized doors with single or double leaf with many different materials and finishing.



Automatic hinged door plant with decus connection



Automatic swingdoors engine



Automatic hinged door section with decus connection



Controlled programmers with open push buttons

MANUAL HINGED DOORS

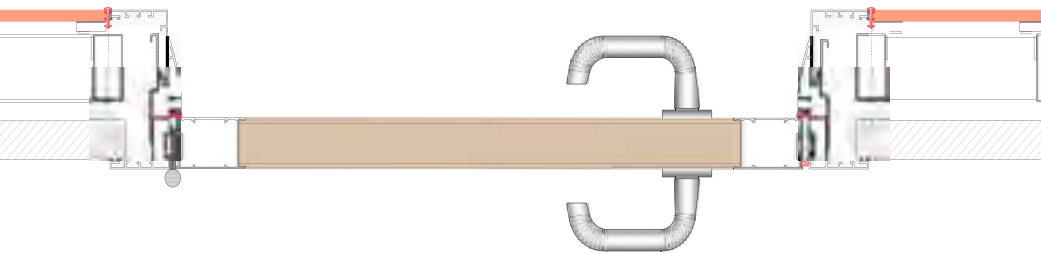
To complete the range of doors, we can supply manual hinged doors for any possible need: with telescopic frames in aluminium or stainless steel, antibacterial handle, access control, ect ...



Stainless steel antibacterial handle



Manual hinged framed door



Manual hinged framed door plant



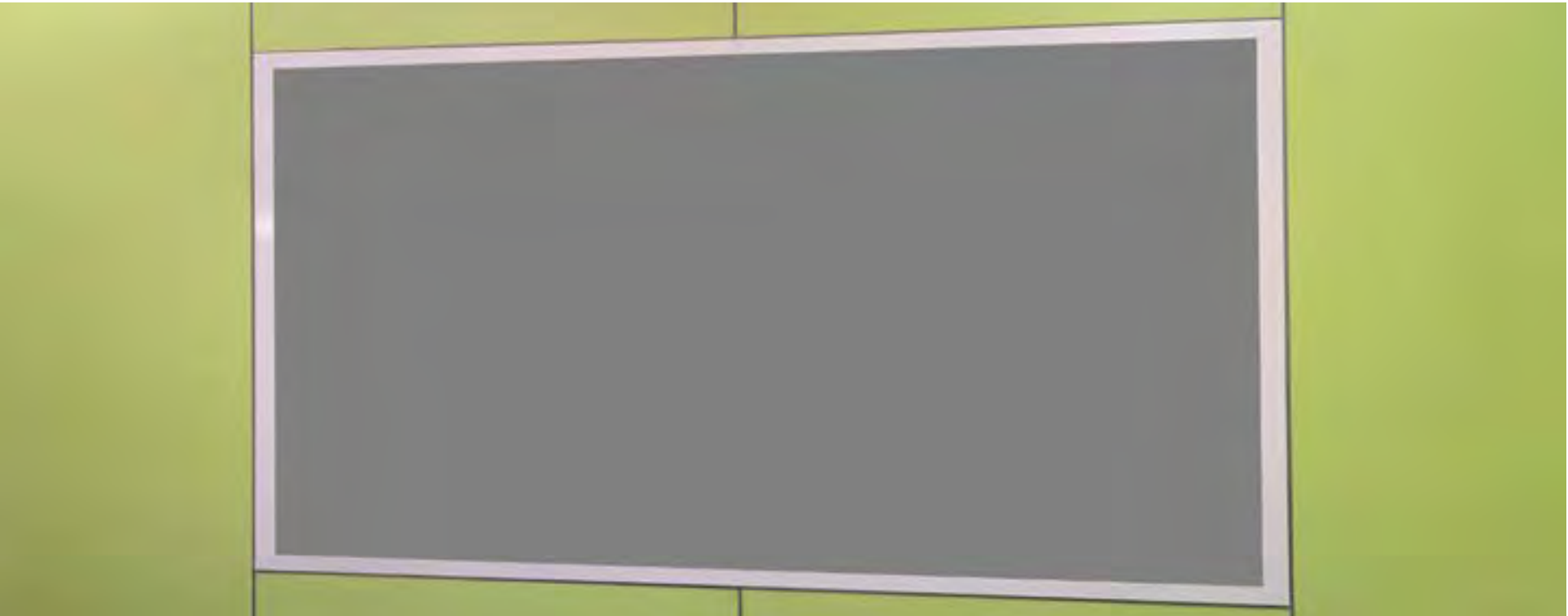
DOOR VIEWER

All the doors can be realized with the insertion of visual glasses, with customized dimensions, with or without internal venetian blind or switchable LCD glass. The glass is installed with black silicon totally flush with the door panel.



ON/OFF VIEWER

All the transparent visual areas (doors, windws, etc ...) can be realized with LCD switchable glasses. This solution can be very useful to create immediate privacy in a specific room just with one touch.



FLOORING

ANTISTATIC FLOORING

Hospital flooring is stain-resistant and low-maintenance. Operating room’s area floor coverings, with various chemicals and liquids being handled, need to have a high level of stain resistance in order to keep the flooring as clean as possible. Stainresistant floor coverings help you meet all your hospital area flooring needs. Extremely low maintenance with high slip resistance, our flooring solutions provide excellent indoor air quality to maximize safety and hygiene while maintaining a good level of comfort for your staff.



Brighter,
cleaner crystal
particles that
add real sparkle



Matt finish for
an improved
design
experience



Easier to install,
lighter & more
flexible to
handle



High resistance
to heavy traffic

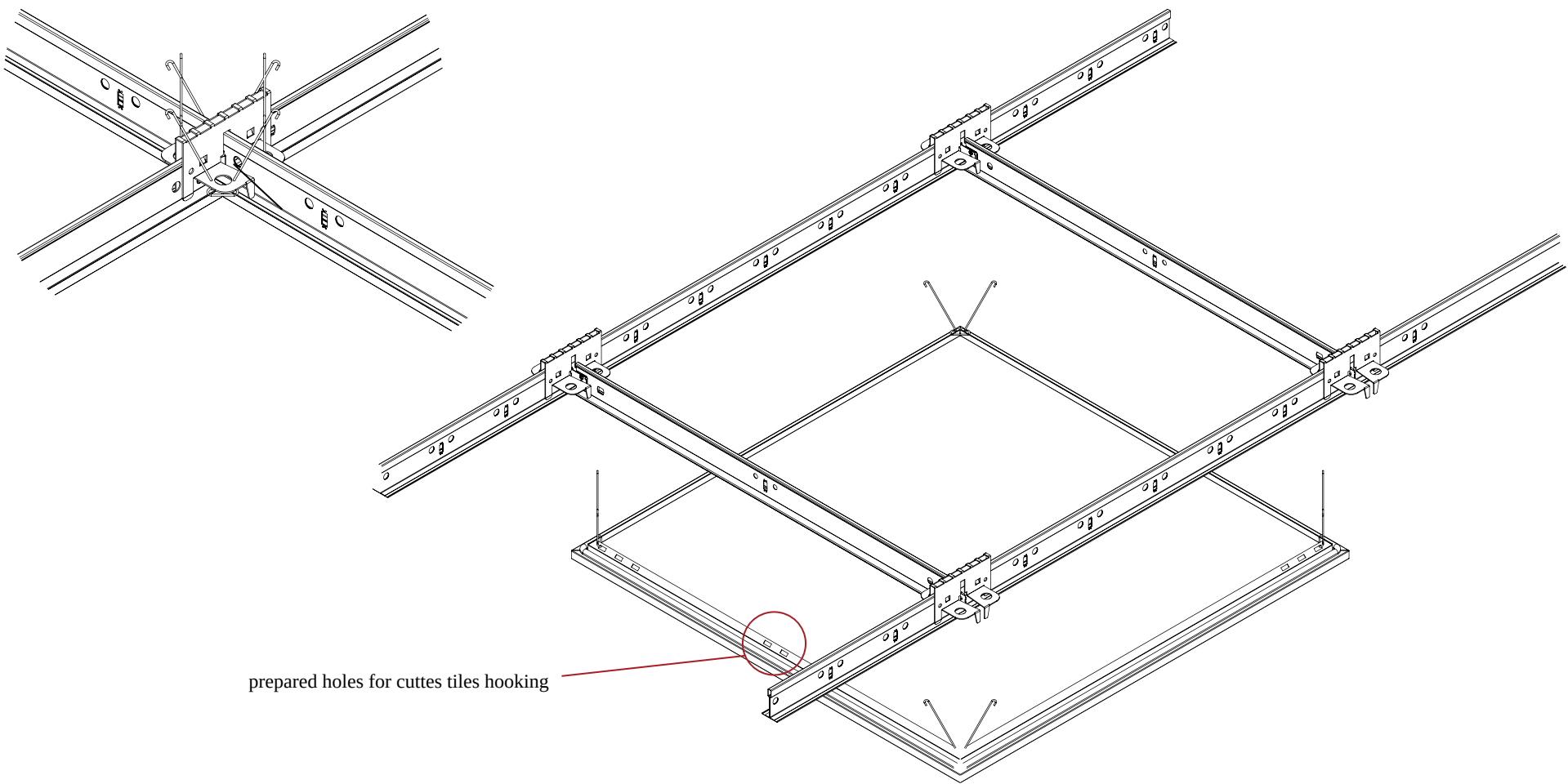


Easier to cut-up
5 times more
blade life

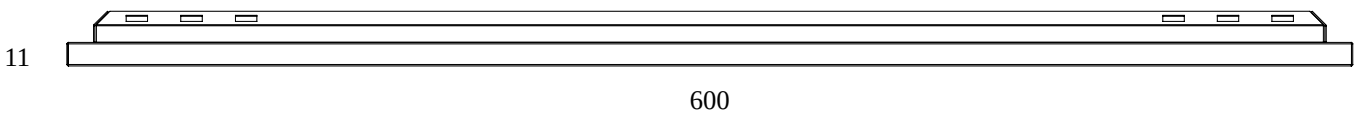
HERMETIC CEILING & LIGHT

HERMETIC CEILING

Our Ceiling is a compact system made up of metal tiles combined with an hidden structure. It has been equipped with a special neoprene gasket. The rubber profile is installed along all sides of the tiles, between panels and perimeter profiles. The ceiling system has been evolved, with additional technical elements, and designed to ensure greater water resistance between the concrete and the environment below. This strong and compact false ceiling has been realized using planar tiles perfectly joining on an hidden structure with tubular main carrier. The harness and fixing springs of tiles, the holding gasket between the modules, the strong sealing on to the walls and the special hygienic polishing make it the perfect solution for the OR environments, where there is a high need of safety, security and comfort.



SECTIONS



Tile sides are properly shaped to be equipped with the sealing gasket.

HERMETIC LIGHTS

Direct Led light recessed fixture, for energy saving. It is suitable for installation on modular counter-ceilings panels with hidden and sealed structure.

Body: White thermosetting epoxy powder (at 180° C) painted steel sheet (RAL 9003), previously degreased, phosphate coating and washing. The light is equipped with inside gaskets, that guarantees full protection against dust and water jets (IP65 protection), for the optical compartment and the recessed parts. These features enables this particular light to be fitted in special environments such as the operating rooms.

Optical unit: Available in micro-prismatic polycarbonate optics or in tempered glass. Degree of protection: full IP65



AIR TREATMENT

LAMINAR AIR FLOW

- To reduce airborne pollutants
- Dilution of pollutants,
- Stable germ displacement
- Protection against contamination of instruments.

For the purpose of planning new buildings and renovating exiting operating theatres, clinics use the current spectrum of surgical interventions as well as the spectrum to be expected over the next 5 - 10 years as a basis. As part of the planning process, the fact that antibiotics are becoming increasingly less efficient (build-up of resistance) while physical protection measures will become more and more important is taken into account.

Sterile instruments are a fundamental component of asepsis in operating theatres. To ensure that they continue to be sterile up to the time they are used, instrument tables must be situated in the protected and sterile area of the operation theatre.



Standard sizes of supply and recirculation air systems

Supply and recirculation air systems can either be supplied in our proven standard sizes or customized to meet the room specifications.

Model	Width [mm]	Length [mm]	Height [mm]	Air volume in m³/h according to DIN	Air volume in m³/h according to HTM	Approx. weight in kg
				$\bar{v} = 0.24 \text{ m/s}$	$\bar{v} = 0.38 \text{ m/s}$	
FFD 12/24	1303	2385	220–400	2500		130
FFD 14/24	1455	2385	220–400	2800		140
FFD 16/24	1607	2385	220–400	3100		160
FFD 18/24	1759	2385	220–400	3400		170
FFD 20/20	1929	1929	220–400	3000		180
FFD 20/24	1929	2385	220–400	3700		190
FFD 22/24	2233	2385	220–400	4300		210
FFD 24/24	2385	2385	220–400	4600		230
FFD 26/26	2537	2537	220–400	5300		260
FFD 29/29	2877	2877	220–500	6800	10800	320
FFD 30/30	3029	3029	220–500	7600	12000	360
FFD 32/32	3181	3181	220–500	8400	13275	410
FFD 32/35	3181	3485	220–500	9200	14570	450
FFD 35/35	3485	3485	220–500	10100	16000	490
FFD 40/40	3941	3941	220–500	13000	20500	640
ULD 24/24	2385	2385	450	4600		*
ULD 26/26	2537	2537	450	5300		*
ULD 29/29	2877	2877	450	6800	10800	*
ULD 32/32	3181	3181	450	8400	13275	*
ULD 32/35	3181	3485	450	9200	14570	*
ULD 35/35	3485	3485	450	10100	16000	*
ULD 40/40	3941	3941	450	13000	20500	*

RECYCLING

PLENUM WITH HEPA FILTER & DIFFUSER

Terminal filter diffuser with lateral inlet. Lightweight and easy to install, it can house both mechanical and fluid seal filters. It can be equipped with micro-perforated protection screens or diffusion screens. The fixing of the filter element is done through rapid counting brackets with Allen pressure screws. They are commonly employed in controlled contamination environments like air diffusion terminal systems.

Anodised extruded alluminum frame sealed to the upper aluminum plenum. Pressure drop connection with frontal access complete with cap in order to verify the pressure drop of the filter element. Mobile brackets (4) for hanging to the ceiling.

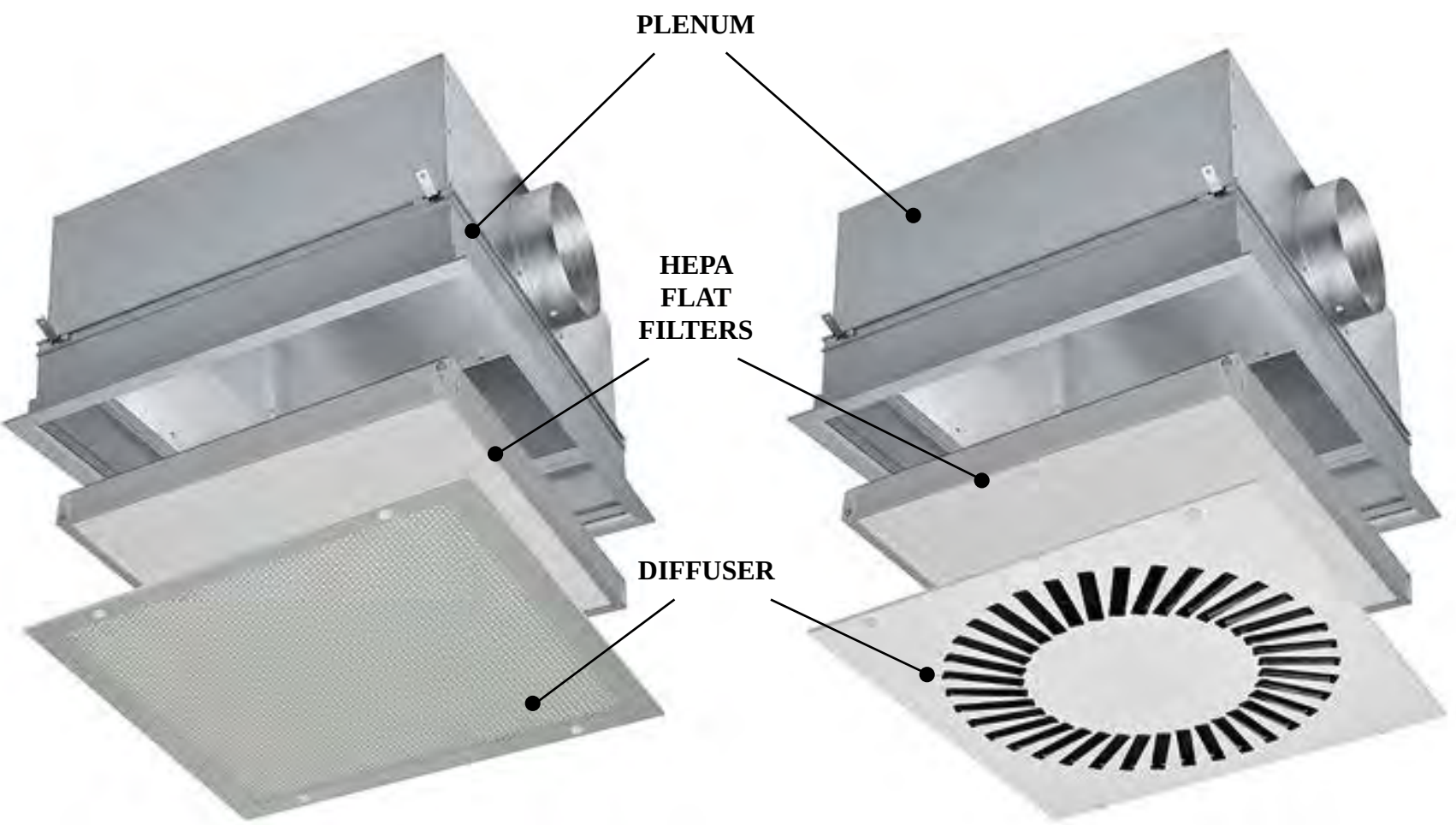
SCREENS

DFA: Perforated aluminum anodised screen for unidirectional flow at low turbulence, available for all sizes.

FILTERS

HEPA flat filter class H14 according to EN 1822: 2010. The accurate construction and rigorous controls make it suitable for laminar flow applications.

Water repellent fiberglass paper pleated with calibrated pitch. Continuous thermoplastic wire separation.



AIR INTAKE GRIDS

The indoor air extraction element can be constituted by a structure made entirely of stainless steel AISI 304. The constructive characteristics of this element make it easily cleanable.

The four corners of the Operating Theater are inclined at 45°, to allow easy cleaning. They are equipped with an A/C system that draws air from the room. This way no particle of contaminated air can return, due to the turbulence, to the operating area.



ACCESSORIES

SURGICAL WASH-BASIN (SCRUB)

Surgical wash-basin is produced in stainless steel AISI 304 standard finishing and includes several technical details that point out its high quality and particular care.

The material resists to the medical devices commonly used in the healthcare field and the lack of sharp corners guarantee a fast and easy cleaning.

The finishing and dimensions of the wash-basin, with its accessories, can be fully personalized according to the customer’s requirements.

The scrub station includes: ermetic touchless dispenser and infrared touchless thermostatic tap.



Stainless Steel wash-basins



WINDOWS VIEWER

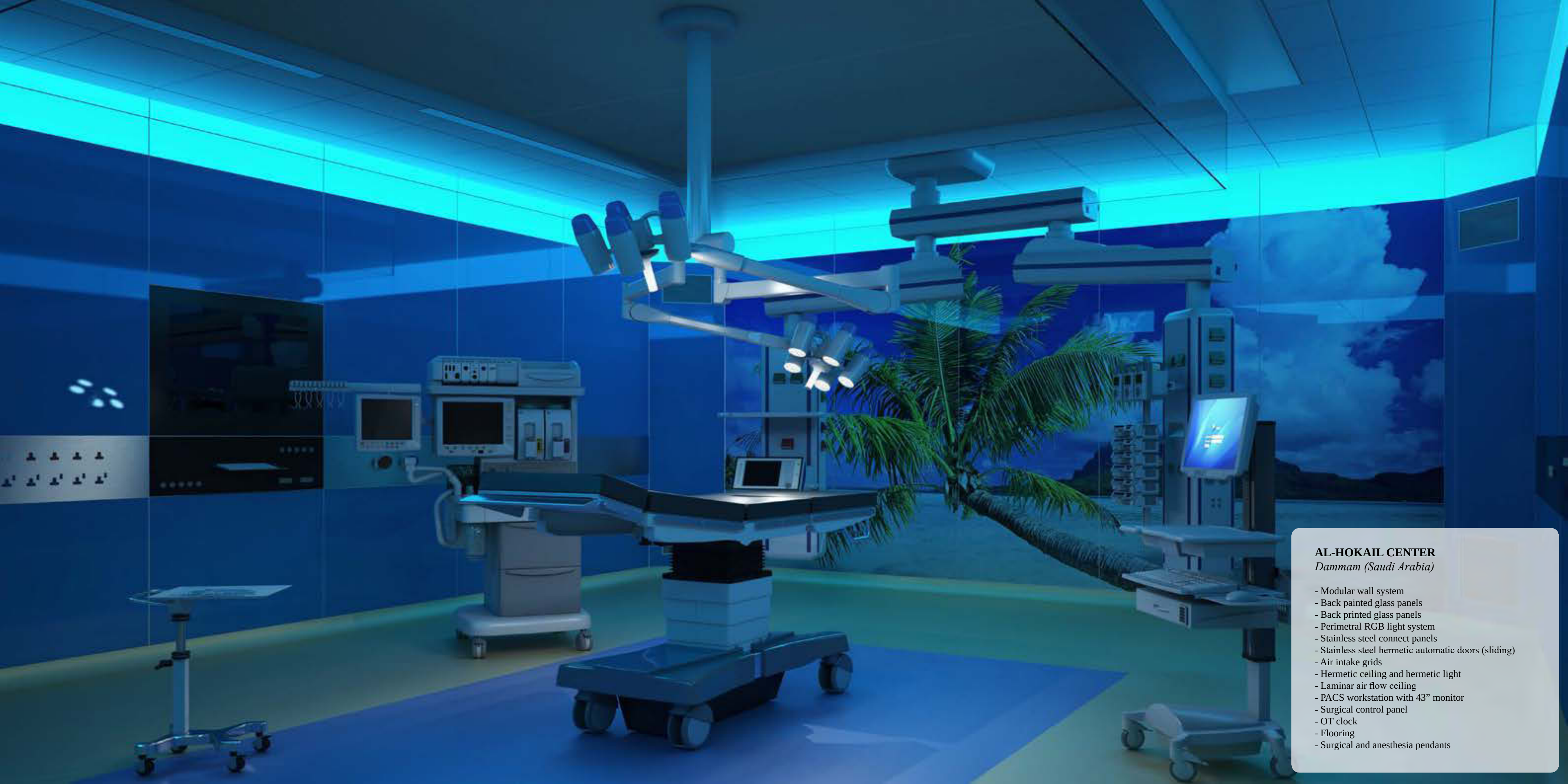
Partial or total transparent glasses useful to create control rooms or visual windows in many different area of the operative block.



VENETIAN BLINDS

Manual or motorized venetian blinds to be include in trasparent windows to satisfy the privacy request in the room





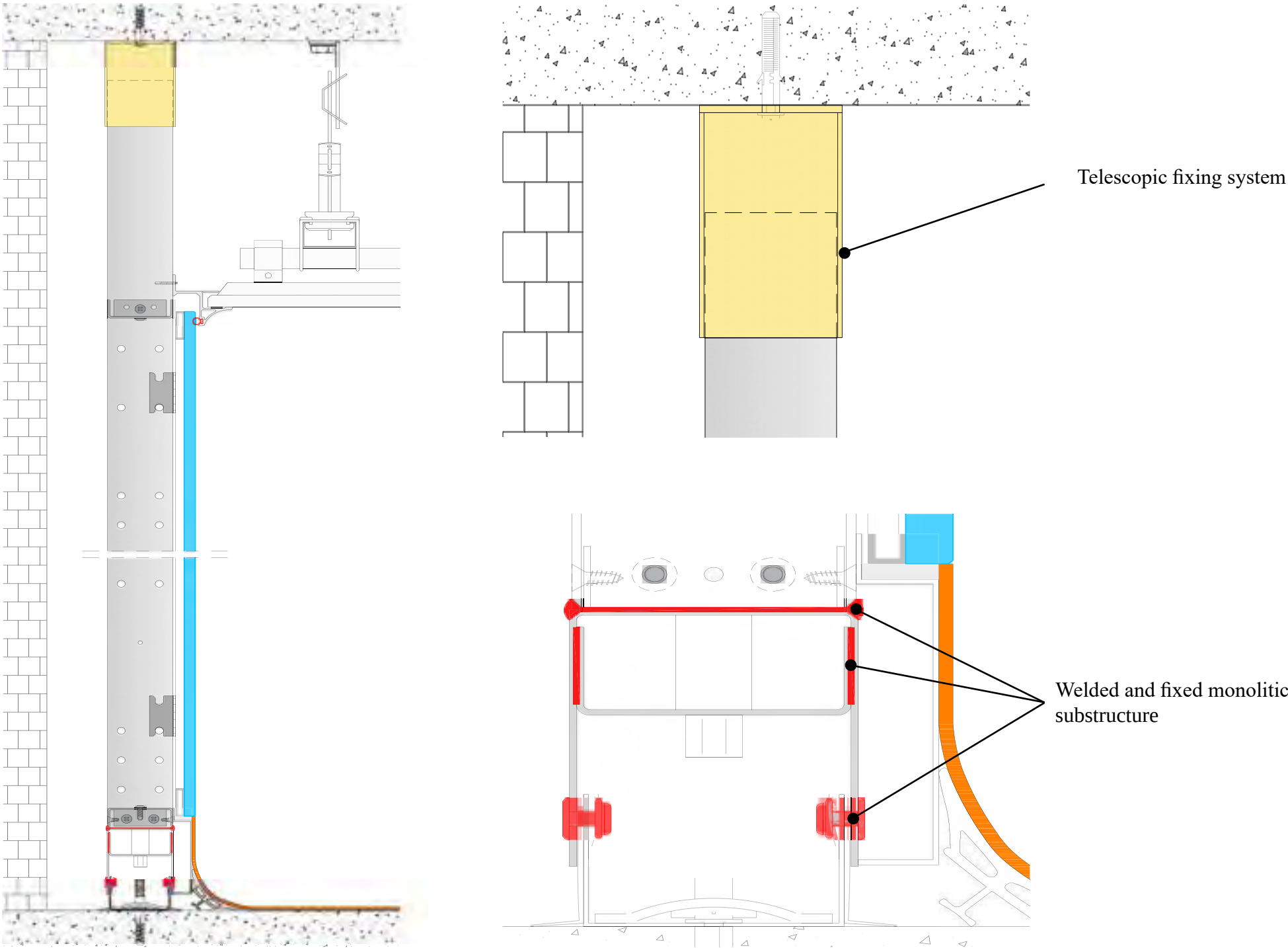
AL-HOKAIL CENTER
Dammam (Saudi Arabia)

- Modular wall system
- Back painted glass panels
- Back painted glass panels
- Perimetral RGB light system
- Stainless steel connect panels
- Stainless steel hermetic automatic doors (sliding)
- Air intake grids
- Hermetic ceiling and hermetic light
- Laminar air flow ceiling
- PACS workstation with 43" monitor
- Surgical control panel
- OT clock
- Flooring
- Surgical and anesthesia pendants

ANTISEISMIC SOLUTION

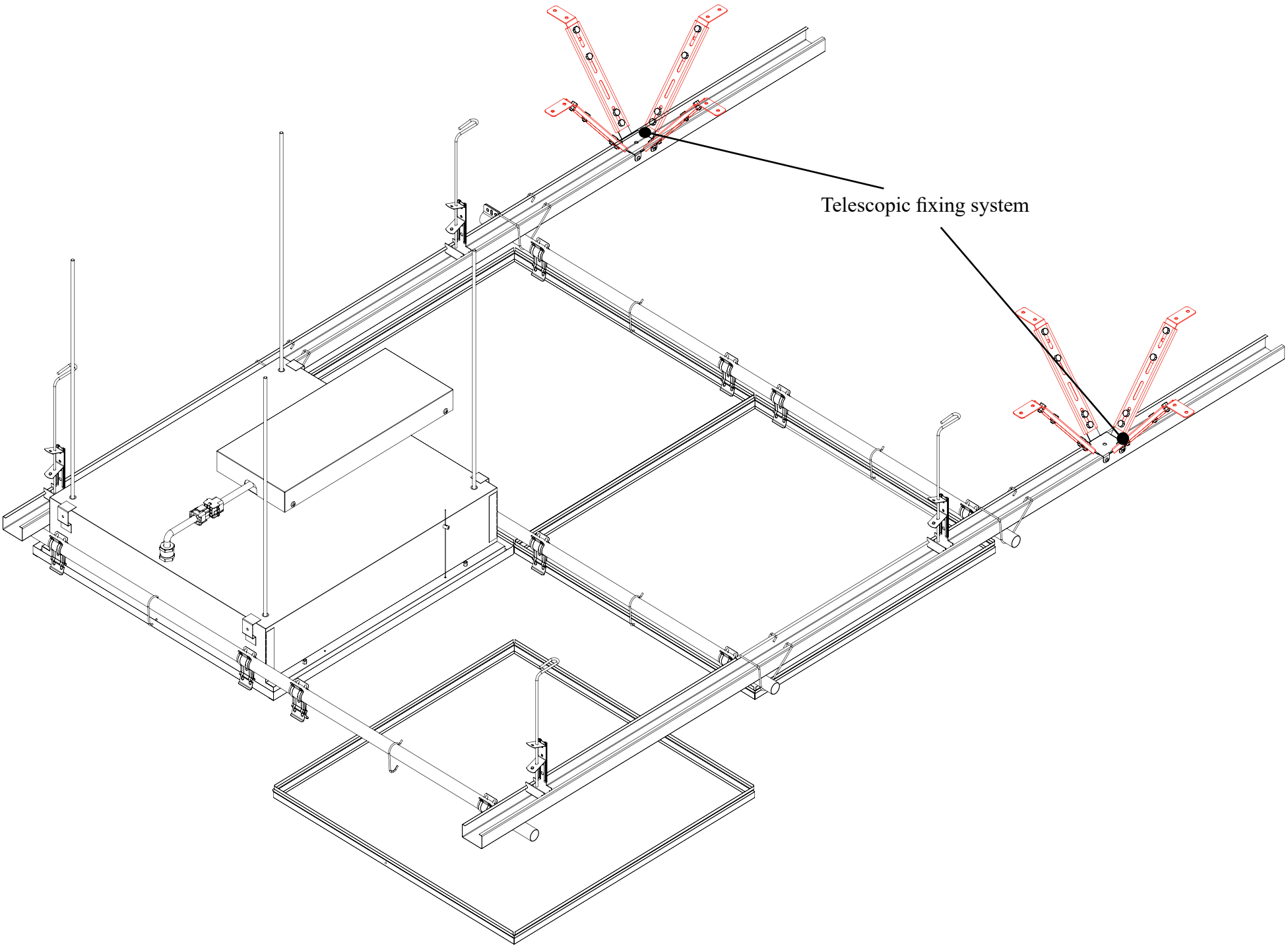
ANTISEISMIC MODULAR PARTITIONS

When the operating room is installed in seismic area, we can introduce specific improvements to the substructure that allows a monolithic connected metal substructure to be more flexible and independent from the movement of the floor/roof. This solution has been approved and tested from local laboratories in countries like New Zeland where this specification is always required.



ANTISEISMIC CEILING

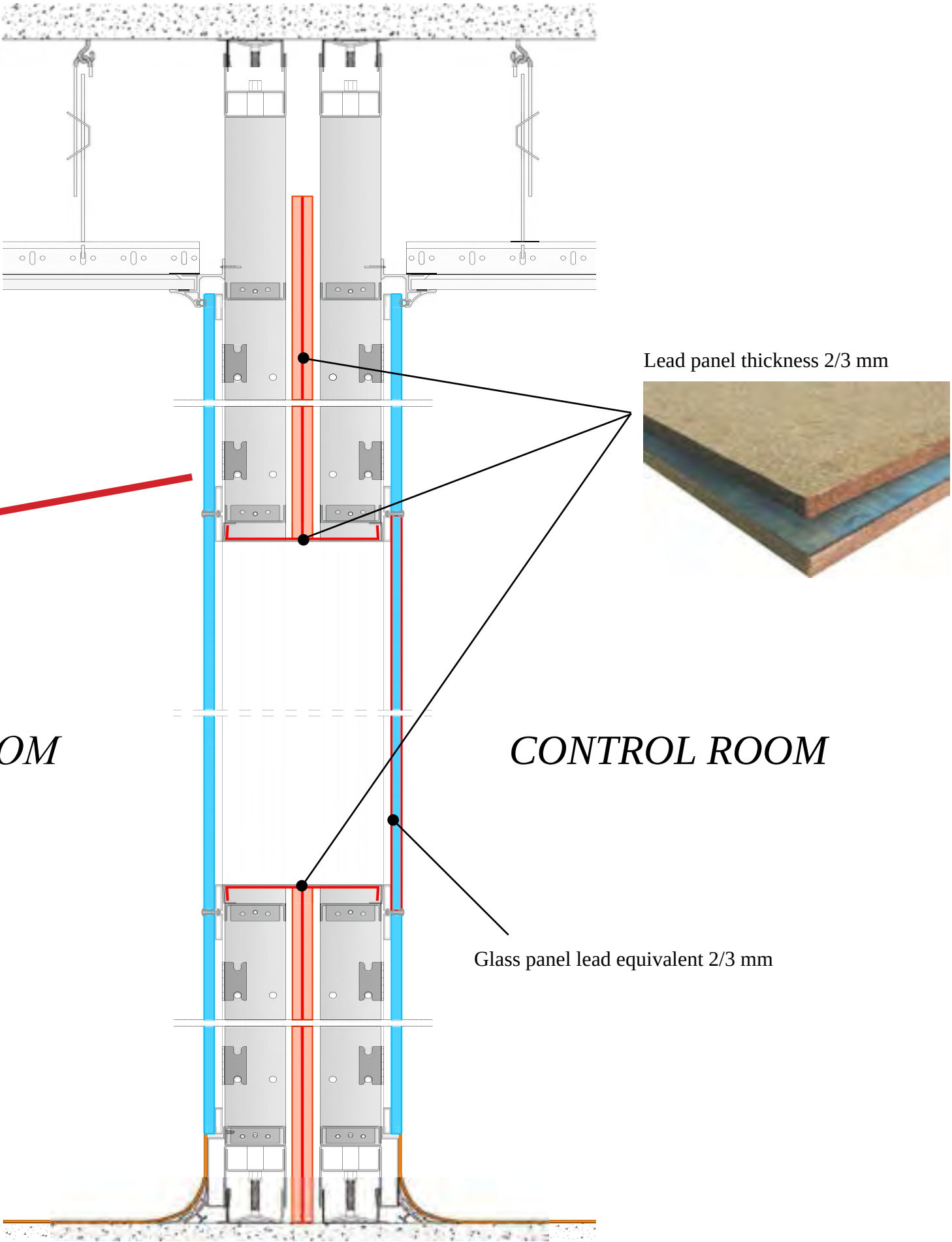
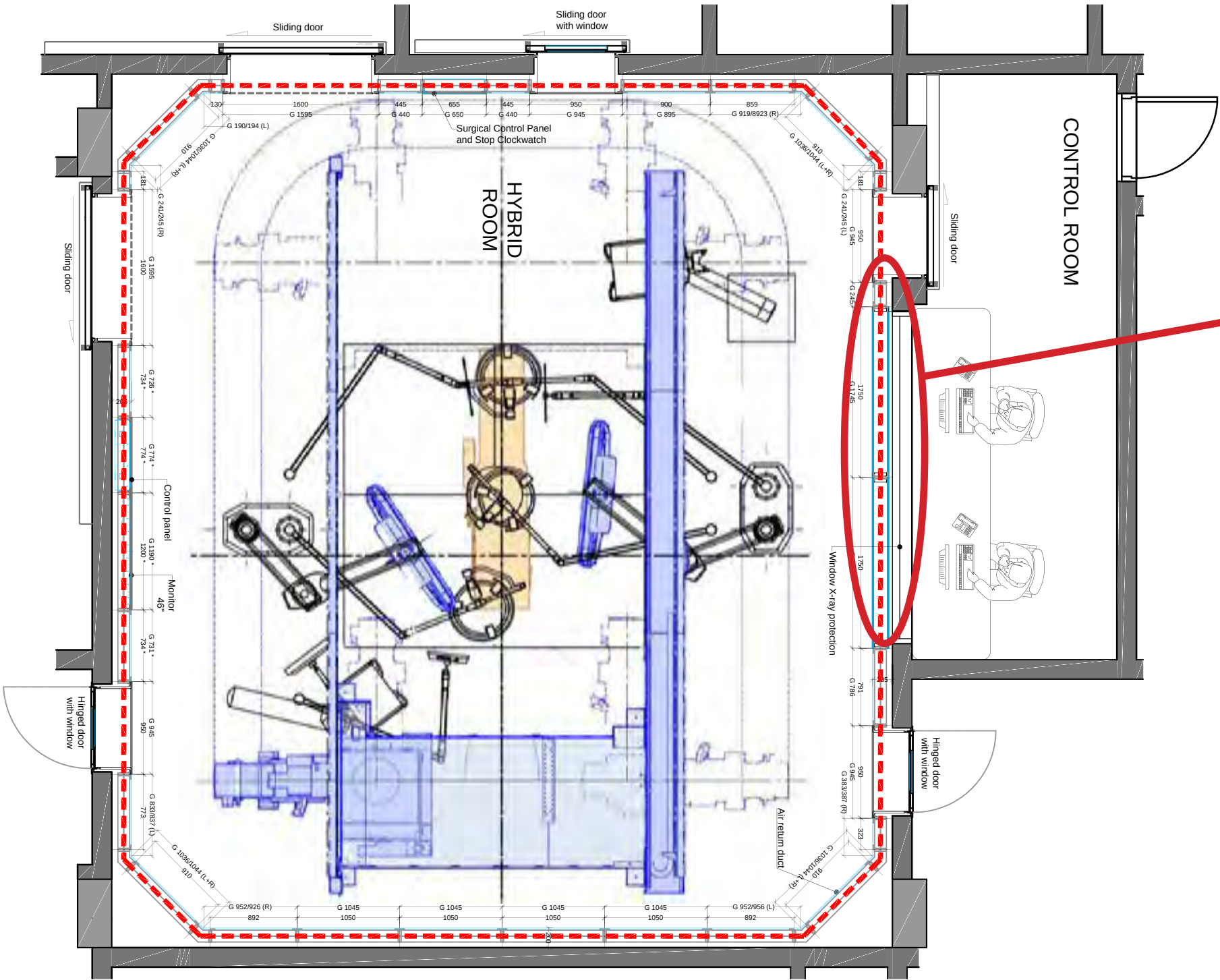
For sismic zone, the system can be equipped with the antisismic kits, whose installation must comply with project requirements and must be verified with technical department.

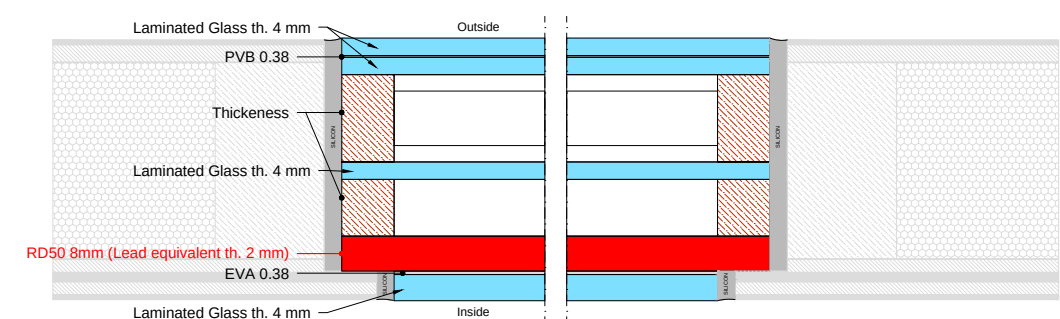
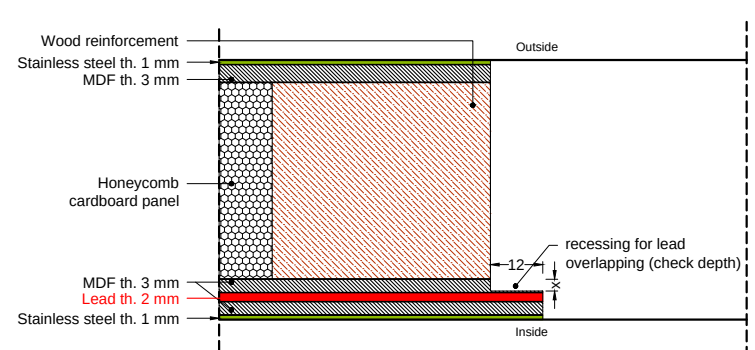
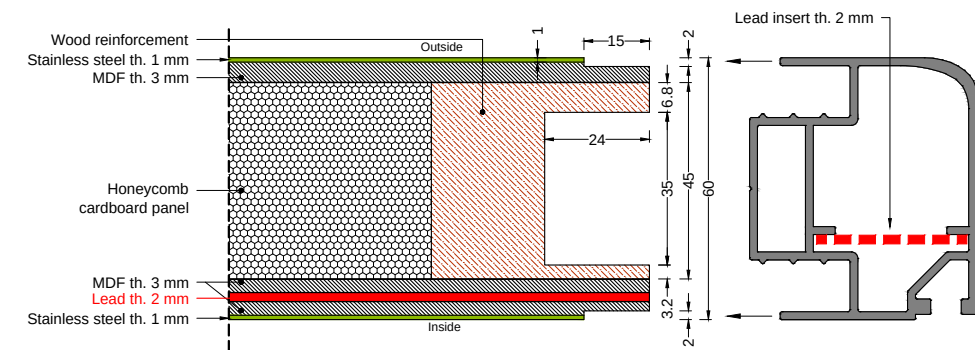
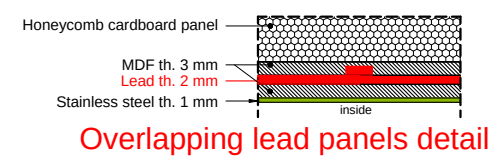
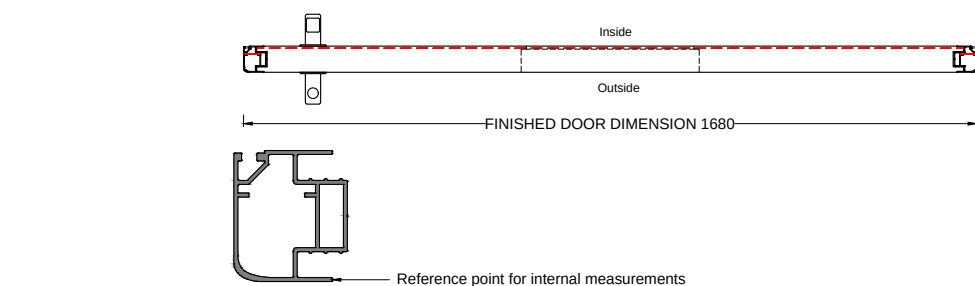
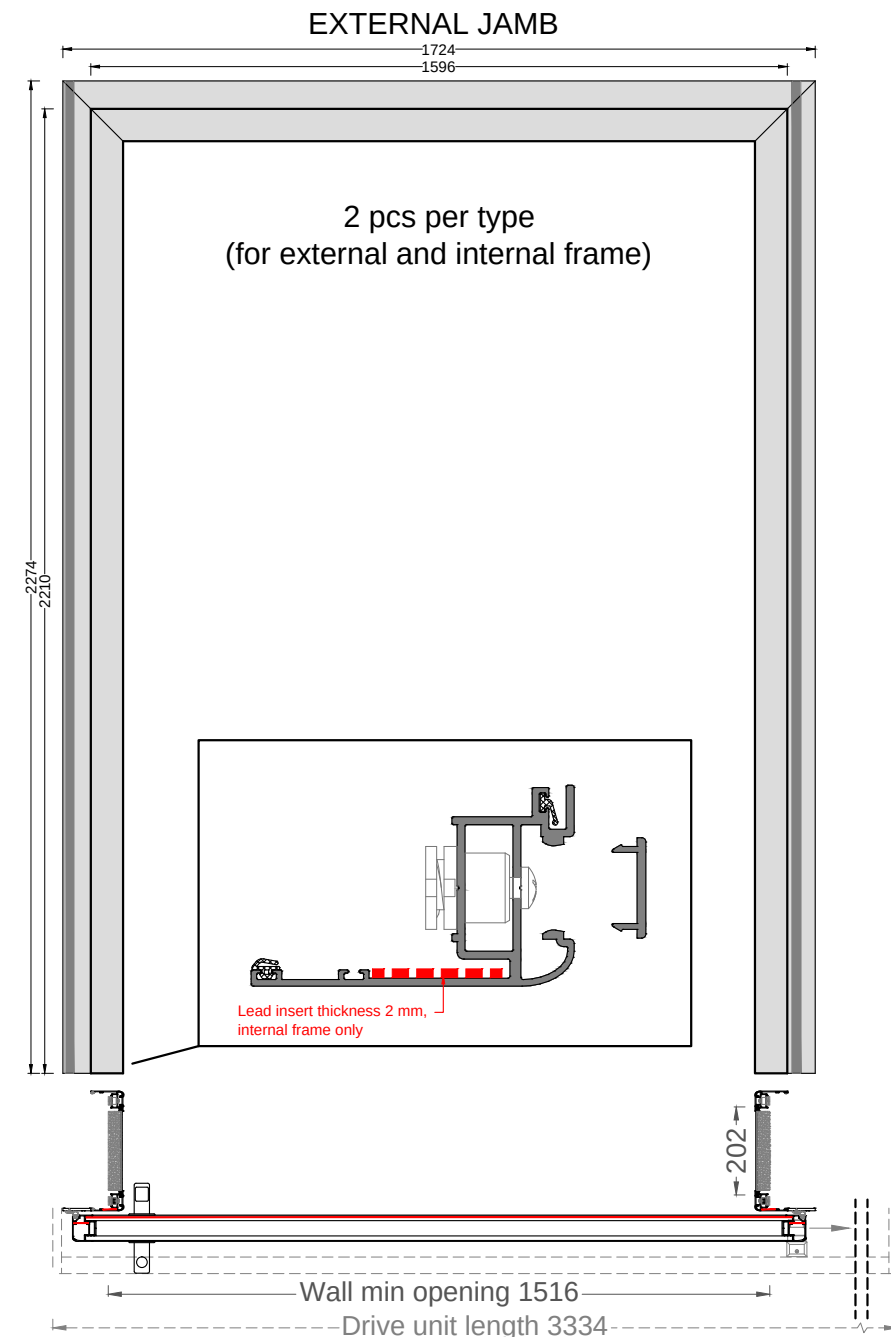
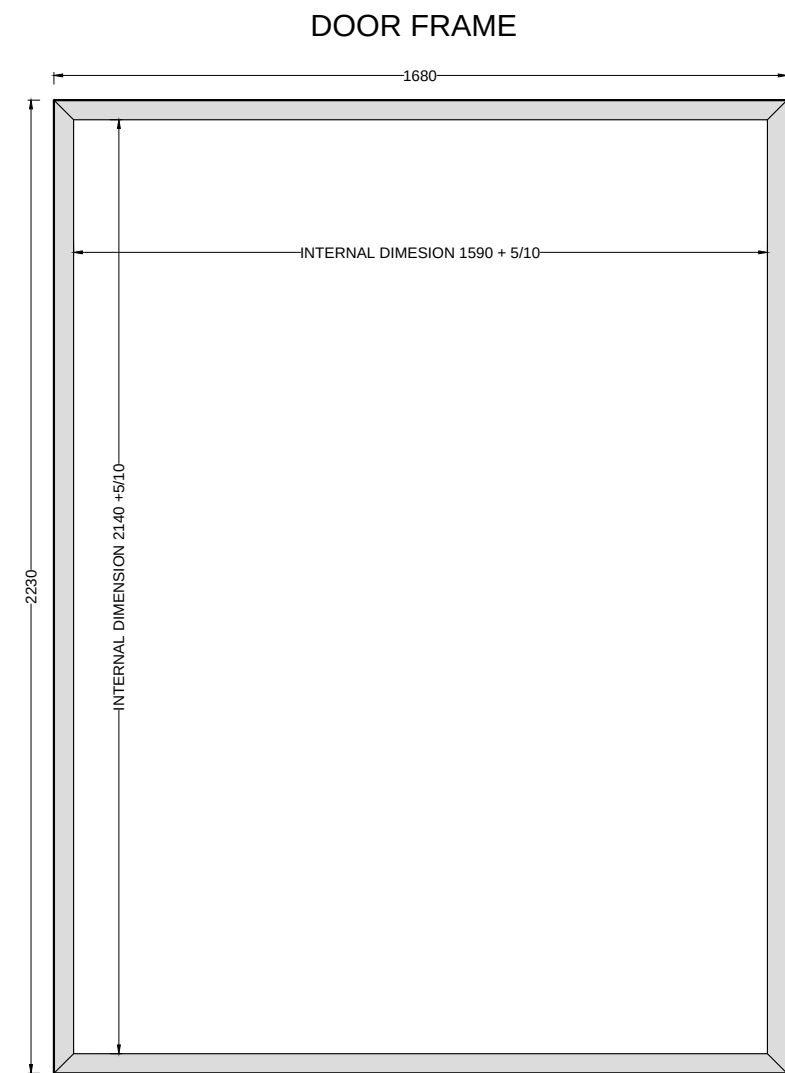
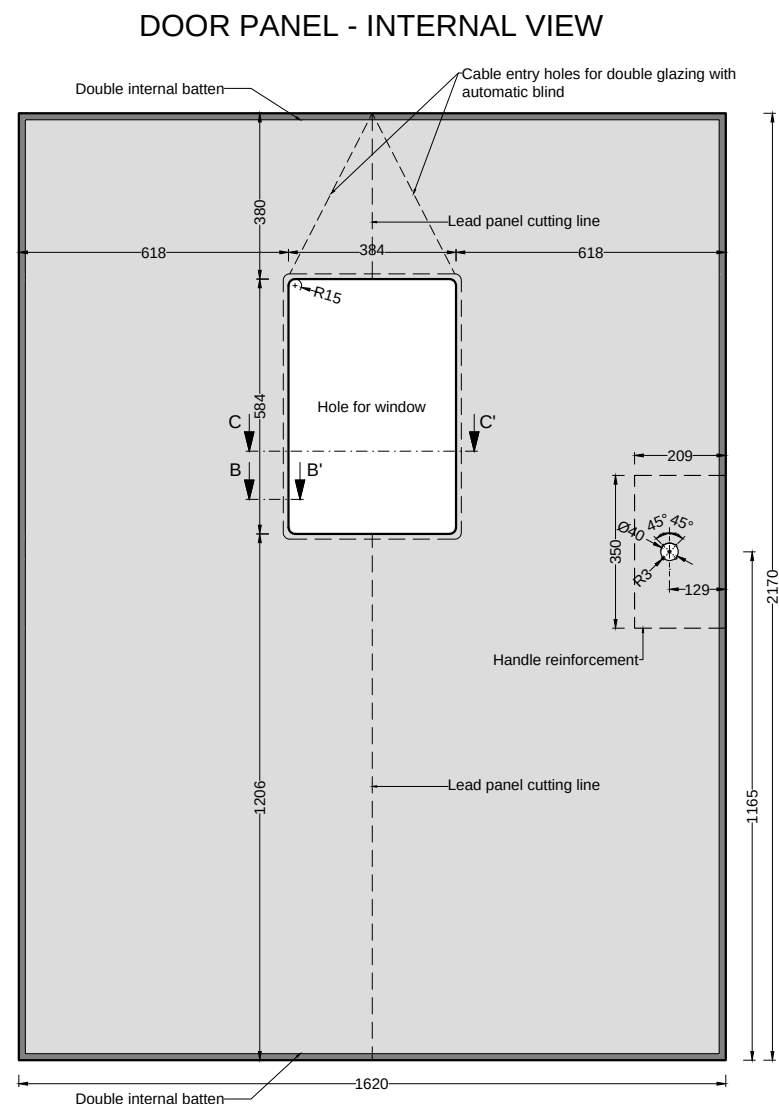
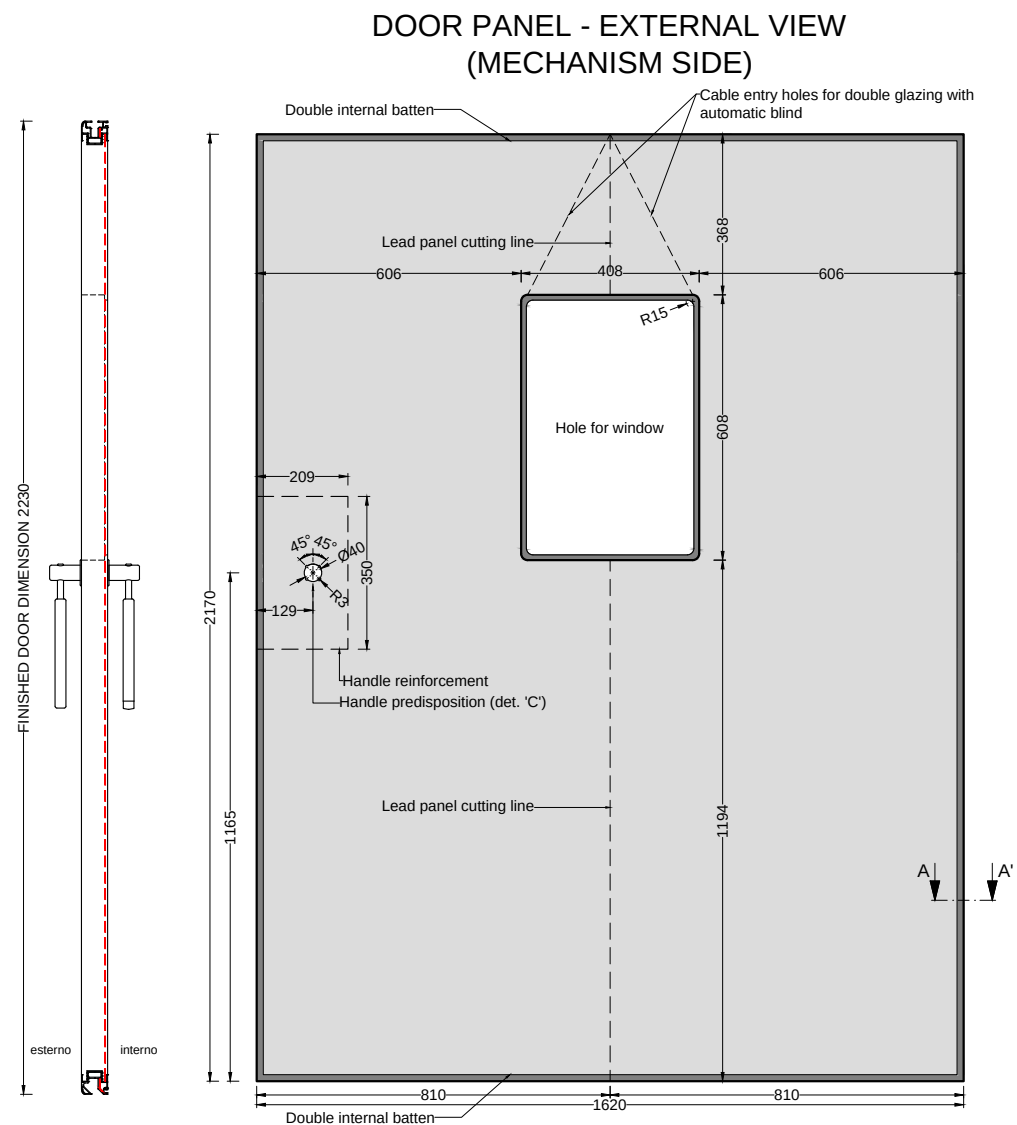


HYBRID ROOM WITH X-RAY PROTECTION

For Hybrid Operating Rooms equipped with advanced medical imaging devices such as fixed c-arms, ct scanners or mri scanner we introduce in the Salus metal substructure an extra lead shilding with 2 o 3 mm thickness.

This lead shield that includes a 2/3 mm lead equivalent glass for the control room can cover and protect all the perimeter walls including sliding or hinged doors.







The real colours may differ from the printed ones.

In order to offer the best to our customer, we reserve the right to modify without notice the technical and functional features of our products.

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