

O.M.A.R. TECHNOLOGY S.R.L.

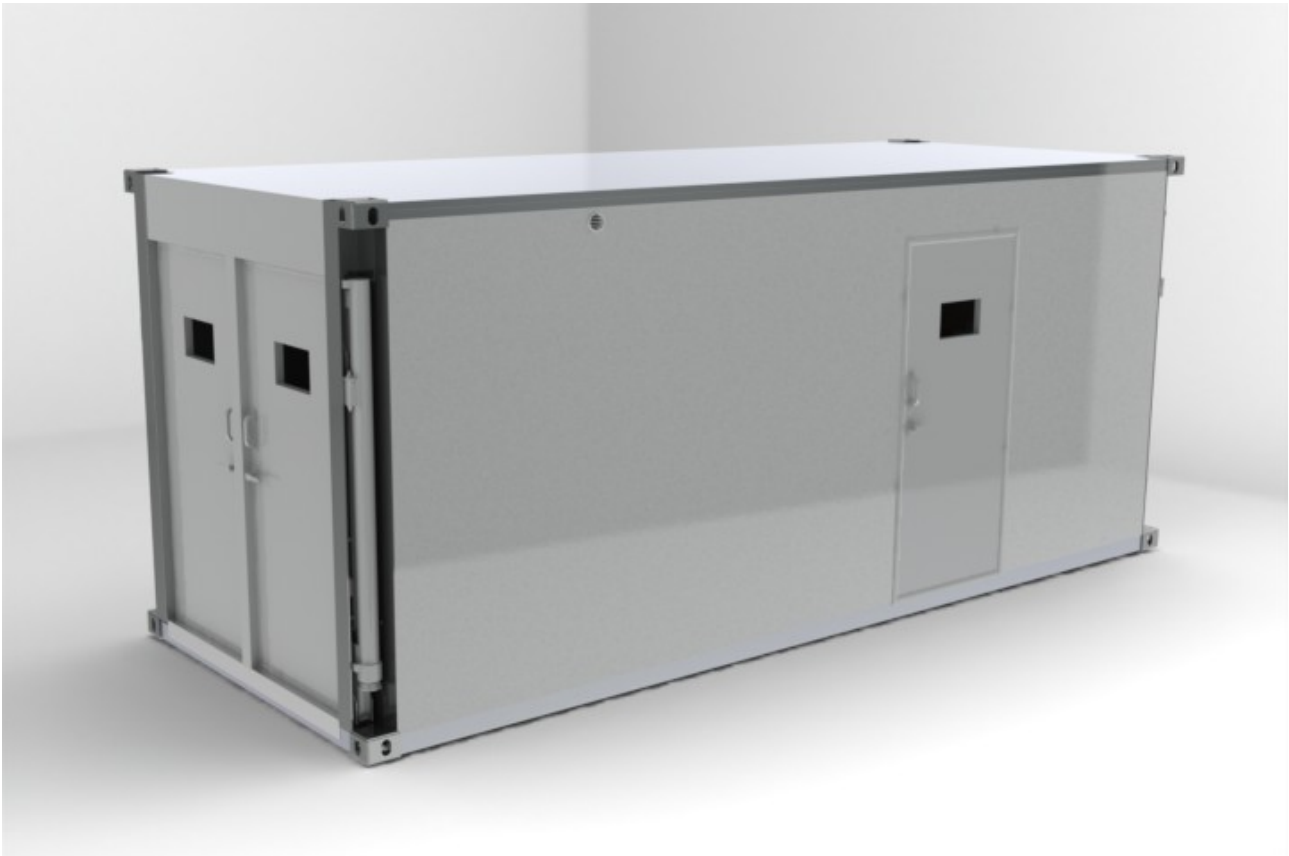


Progettazione - Costruzione - attrezzature meccaniche
su disegno - Licenza e brevettate

Company certified UNI EN ISO 9001 N° 3966

MAMMOGRAPHY SHELTER

MOD. C.F. 300



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DESCRIPTION

The shelter used for this production which is comparable in size to standard ISO 20 "1CC, will be built with a perimeter frame and floor with extruded anticorodal aluminium, the roof and the walls will be made with steel panels/polyurethane/steel panels, with a thickness of 38.mm in class 1 and the adopted system for fixing the panels with the structure, will be carried out in such a way that it will not create thermal bridges (conductive points).

The shelter will also be fitted with ISO corner blocks, both at the bottom and at the top, the same connection will be applied and electro welded at the 4 corners of the special U-profiles that in addition to consolidate the structure of the lower perimetric from the top, allows to contain the lifting jacks during the transportation by retracting the same ones in the limited dimensions allowed by the Highway Code.

The lifting hydraulic jacks are driven by an electro-hydraulic system powered by internal batteries or by an electronic network or a generator of 220 Volts, that allows a single operator, using a keypad with remote control, in absolute safety, make the loading and unloading from vehicles easy without resorting to external means, such as: cranes, forklifts, bridge cranes, etc. even on uneven grounds, provided they are compact.

The operator, using a remote control can operate the hydraulic jacks simultaneously, in pairs or individually, this particularity allows to level up the shelter plan even if the underlying ground is not perfectly levelled.

The shelter will be divided into three main areas, one used as two changing rooms, and a back operations area.

The working area will be covered with anti X special panels in order to comply with regulations.

All electrical appliances as well as air-conditioning will be designed according to needs of the user and will need to be properly certified.

Please note that structurally the shelter does not require maintenance, and we can vouch for this for the next 10 years. As proof of what we have stated, we would like to remind you that they have been in use for over 20 years at the Department of Health of the Armed Forces in dozens of similar facilities provided by us and used in several peacekeeping missions in Somalia, Mozambique , Bosnia, Kosovo and recently in Chad.

Twenty years of experience in the construction of shelters for hospital use allows us to offer you a reliable, structurally robust, simple to use and ergonomically designed product for medical purposes.

Please also note that the shelters provided to Health departments of the Armed Forces, during the test phase, were subjected to all resistance tests at the Technical Centers, surpassing the same with positive results, including a test in a climatic chamber.

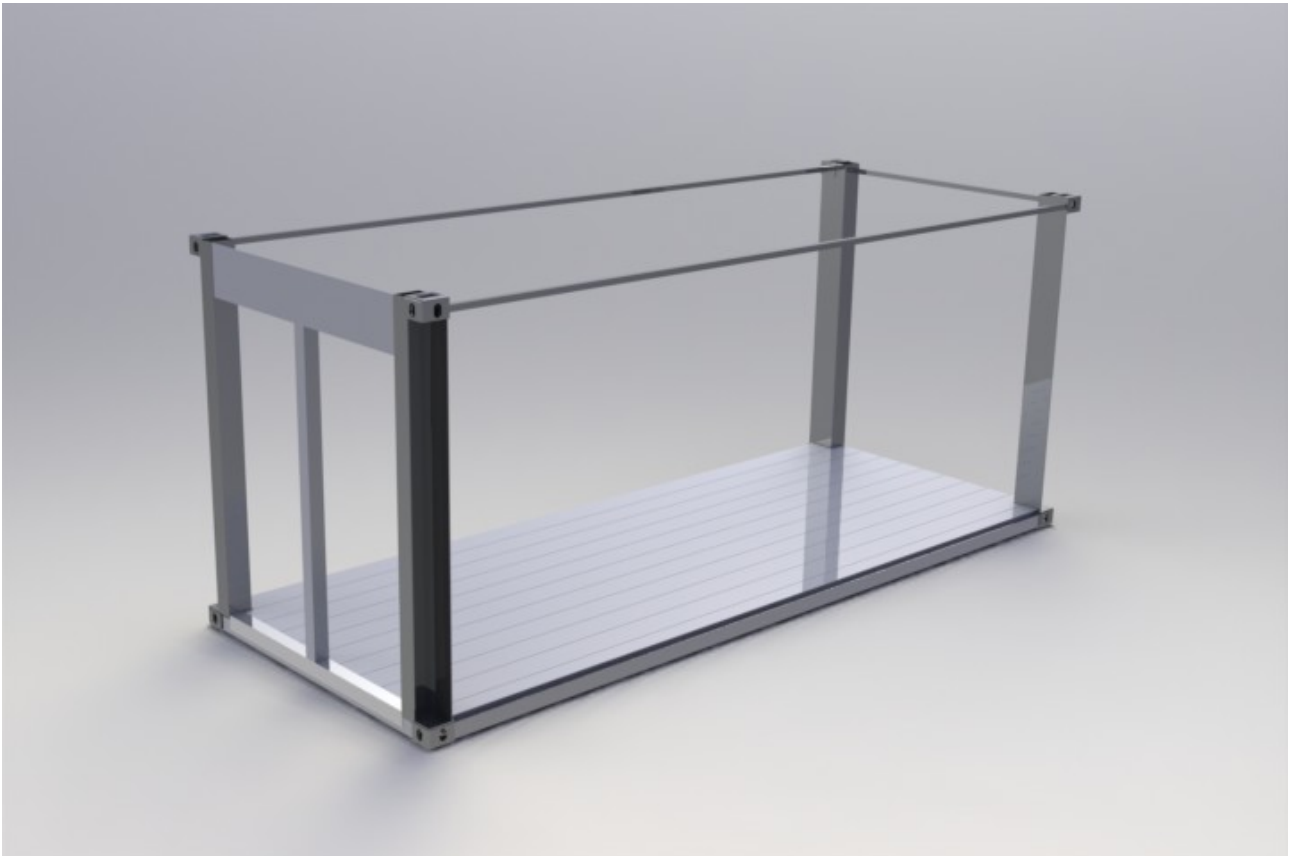
MAIN FEATURES

EXTERNAL DIMENSIONS SHELTER 20" ISO 1 CC:

LENGTH	mm. 6050 c.a.
WIDTH	mm. 2450 c.a.
HEIGHT	mm. 2590 c.a.

SHELTER STRUCTURE

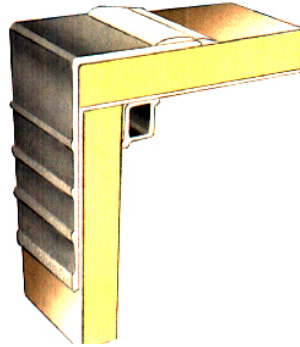
The basic structure and the two heads, will be built with tubular profiles of extruded aluminum welded to each other, the floor will be made with timber slats in anticorodal aluminum, the same will be welded to the base structure being an integral part of the structure itself. At the lower ends of the base structure, the lower corner blocks will be inserted.



The front headboard made with a structure consisting of extruded anticorodal aluminium will be divided into two parts, in order to obtain two access doors to their respective dressing room areas. At the ends of the cylinder heads, the corner blocks will be applied, which will be connected to the upper beams using the same placement of tubular steel. The connection between the bottom (base) and upper (cross-head), will be made through the application of U-shaped steel profiles welded on blocks of lower and upper corners, which will also serve for the fixing and housing of the hydraulic jacks lifting.

ROOF AND WALLS COMPOSITION

The roof and walls are made of panels with load-bearing steel / polyurethane / steel thickness mm 38 anchored to each other to avoid conductive points (thermal bridges), the same will be realized in such a way not to undergo detachments or permanent deformation of any kind as a result of the stresses arising from the conditions of transport and envisaged use. with the characteristics listed below:



- Resistant to water hammer
- Resistant to vibrations
- Fire and flame resistant class 1
- Vapor Tightness
- Protection against magnetic and electrical fields
- Soundproofs
- Resistant to corrosions
- Resistant to chemical and biological composition of heat loss coefficient K 00:45

FLOOR

The load-bearing type floor, will be made of anticorodal aluminium slats. 40 mm. electro-welded to the base structure, so that it becomes an integral part of the basement and helps consolidate the entire perimeter structure electro-welded to it.



COATING AND INTERNAL MAGNETIC SHIELDING

The floor of the Shelter, will be coated with antistatic washable high resistance PVC , the joints will be electro-welded with similar material so that during the wash cycle infiltrations will not occur that may lead to the detachment of the coating.



The work area will be covered with special panels to antiX standards, which can guarantee the total shielding of the room.

Additionally, the operator will be protected from radiations by dividing panel with glass shield, to which we have listed the details of that screen below:

Antix wall panels Pb 1 mm plastic laminated finish.

Constructed of double wood chipboard -repellent with interposed foil calibrated in lead, formed by rolling from molten loaves of high quality, free of impurities, porosity and defects in workmanship using lead-in plate in compliance with UNI 3165 with a 99.9% title product according to the UNI 6450-69

Complete finishing of joints, skirting and perimeter finishes in anodized aluminum or painted either DL

Facades coated with plastic laminate grade color of choice D.L.

Control Cabin

Prefabricated walls made with tubular structure

F.to 1.2 = 1.2 m x 2.4 m h = 2.88 SQFT

Antix panels 1 mm Pb plastic walls laminated finish.

Constructed of double wood chipboard -repellent wood with interposed foil calibrated in lead, formed by rolling from molten loaves of high quality, free of impurities, porosity and defects in workmanship using lead-in plate in compliance with UNI 3165 with a 99.9% title product according to the UNI 6450-69

Complete finishing of joints, skirting and perimeter finishes in anodized aluminum or painted either D.L.

Facades coated with plastic laminate grade color of your choice D.L.

Unleaded waterproof wall panels

Built in double water repellent wood chipboard

Complete finishing between the junctions, plinth and perimeter finishing in anodized aluminium or lacquered choice D.L.

Facades coated with plastic laminate grade color of your choice D.L.

Crystal antix Pb. 1 mm size 60x80 cm h complete with frame

Perfectly transparent with edge grinding and guaranteed lead equivalence over the entire surface. Complies with EC/1331-2-DIN 6841

Antix frame with lead foil calibrated Pb 2 mm obtained by rolling from molten ingots of high quality, free of impurities, defects and porosity of working 99.9% title. Counterframe box and Crystal glass door for inserting masonry or visual prefabricated walls anodised aluminium finish, 15 cm thick, expandable on demand as needed.

Antix swing door Pb 1 mm h 80x210 cm format suitable for compartment (cm 95x217h)

Made of hard wood honeycomb structure with interposed foil calibrated in lead, formed by rolling from molten loaves of high quality, free of impurities, porosity and defects in workmanship using lead-in plate in compliance with UNI 3165 with 99.9% title product according to UNI 6450-69.

accompanied by

Extendable jambs antix based on the size of the wall, built in solid wood, complete with plates in lead positioned in such a way to ensure continuity of the protection between the flap and the wall, bearing hinges adjustable with removable pin, lock cylinders with Yale type and lever handle, trims wooden sealed for protection and finishing the perimeter of the jamb.

Facades coated with plastic laminate grade color of your choice D.L.

Antix jambs, architraves perimeter, corner profiles for edging anodized aluminum doors.

15 cm standard thick jambs, expandable on demand as needed.

Microswitch included

Antix door swing eq. Pb 1 mm h 90x210 cm format suitable for compartment (cm 105x217h)

Door Panel Antix panels 1 mm Pb wall plastic laminated finish.

Built in double water repellent wood chipboard with calibrated lead foil, obtained by rolling from molten ingots of high quality, free from impurities, porosity and defects in production using lead in the plate conforms to UNI 3165 with 99.9% title produced according to UNI 6450-69

Anodised aluminium finish for compartment area

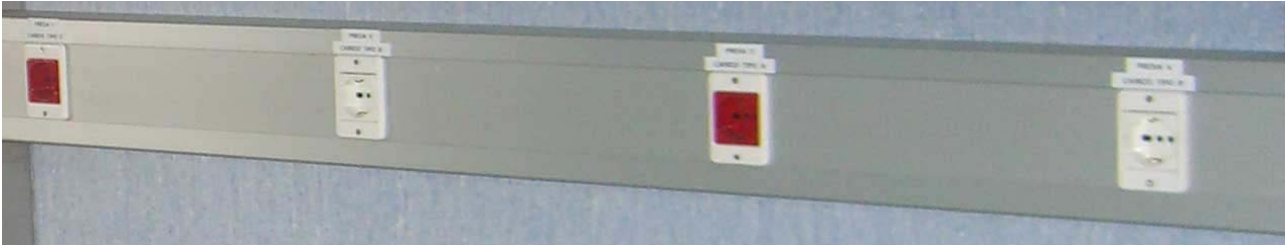
5 cm thick, expandable on demand as needed.

CE Mark

Dimensions 21x7, 5 x 12 .5 h cm

ELECTRICAL SYSTEM

The electrical system will be built to IEC standards, lighting points will be prepared in sufficient quantity to illuminate the various departments. The power outlets will be included in special aluminum ducts positioned on the perimeter walls and each outlet will be served by circuit breakers.



A general electric panel will be provided that will be positioned on the inner wall of the shelter so that operators, have easy access to it.

For a greater comfort and to adapt to the needs of operators, all the lights will be individually activated in order to be able to choose the desired light intensity.

The lighting system will be divided such as:

no. 3 ceiling lights 2 x 36 W placed in the working area

no. 2 ceiling lights 2 x 18 W inside the 2 locker rooms

all ceiling lights will be integrated with emergency light batteries and power-

As per the regulations, to indicate the presence of radiations and a ban on entry in the room, there will be a no.3 set up light signals of "radiation Hazards" which will have a dual front light section

White light: shows the signs and indicates RX powered equipment

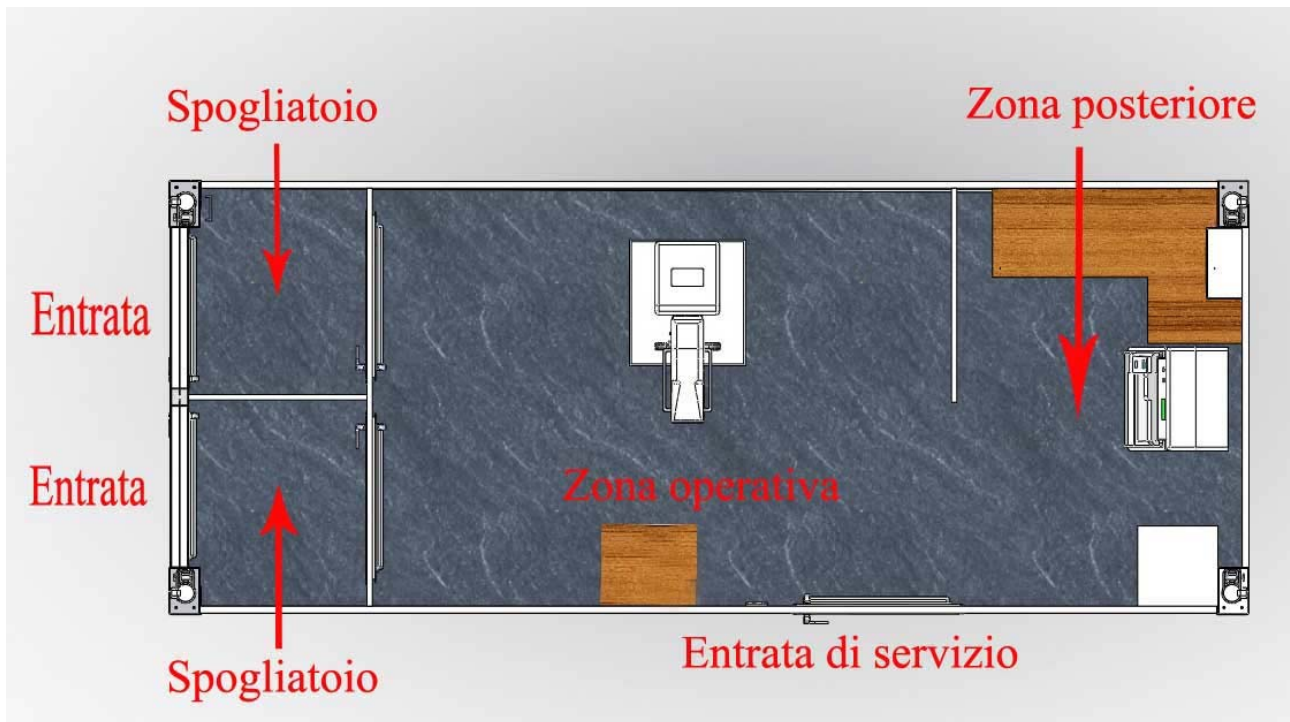
Red light: intermittently to signal RX output

The same will be placed inside the two dressing rooms to indicate when the patient can enter the operating area and outside the back door.

Additionally, data access will be placed to access computer connections.



INTERNAL SUBDIVISION

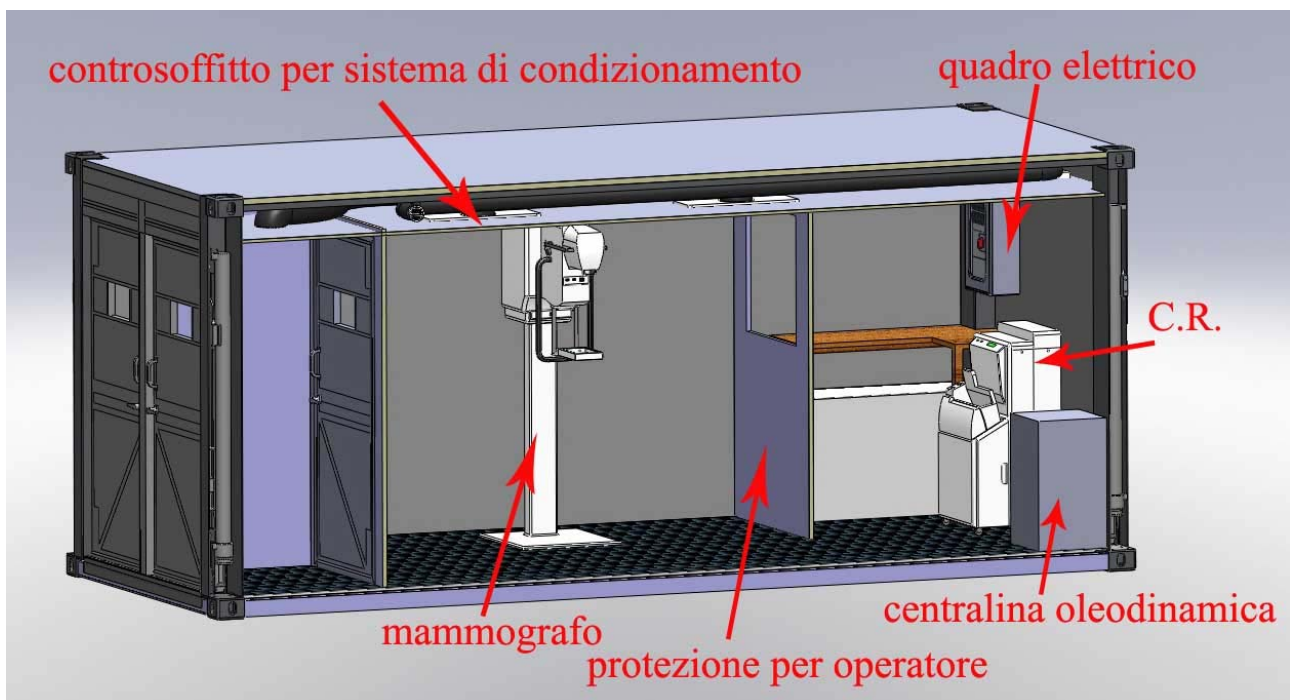


The shelter will be divided as follows:

Two separate locker rooms with their inputs

Central operating area with mammography

The rear console command, workbench, CR, UPS, electric, electro-hydraulic power handling lifting jacks, air conditioner



Dressing Rooms

The two dressing rooms, with dimensions of 1300 X 1000 mm will be lined with antistatic PVC, a material normally used in hospital structures, all junctions will be electro-welded to prevent infiltration of liquids when cleaning and washing, which could cause the same separation from the walls or the floor.

They will have their own comprehensive emergency light, a signal lamp of "Radiation Hazard" and speakers for music.

Every locker room will be complete with racks and mirrors.

They will be equipped with exterior doors with a lock, an external and internal panic key, also with doors that divide the locker room from the operating room, which will be made of antiX.

The size of the same will be H 2100 x 900

The two exterior doors shall be provided with an adequate size spy hole by a shatterproof glass to enable the external vision.

Operating Area

The operational area will have dimensions of 3000 X 2300 mm in the central part, bound to both the floor and the roof is where the equipment for mammographic examinations will be placed.

The premises will be completely shielded from antiX, panels and not present any obstacle or protrusion that can impede or hinder the passage of both patients and medical staff.

There will be an access door used by medical personnel to access the full room with emergency handle and two doors that join the said area with the changing rooms.

It will have n° 2 ceiling lights, complete with emergency light, individually operated at the operator's choice, speakers for music

Back Area

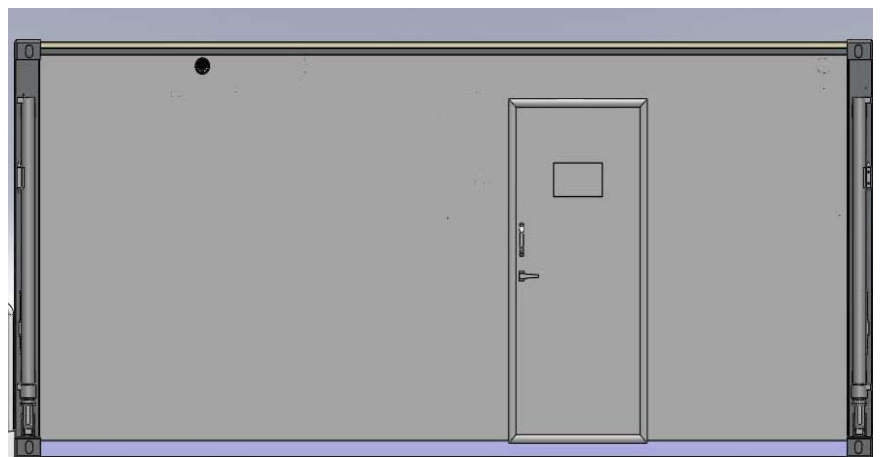
The back area will have dimensions of 1500 X 2300 mm

It will be divided by the operating area by the dividing operator walls.

Those walls are made of glass panels that will protect the operator from antiX emission of gamma rays during the course of their work.

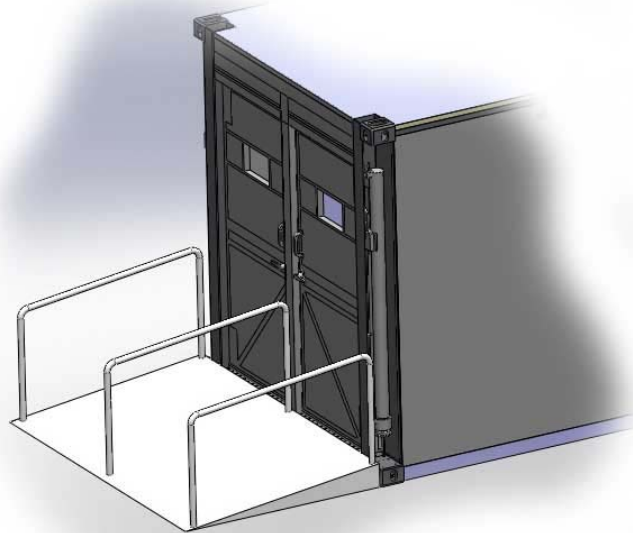
ACCESS DOORS

The Shelter will be fitted with three access doors, two on the front for the access of "patients" and a service door on the long wall of the container for medical staff access, suitably insulated with double locks.



Access For Handicaps

The ability to use the shelter on the ground instead of on a truck, makes the access of disabled people with wheelchairs or with walking disabilities easier, because in this case, the floor decking is only 170 mm from the floor, to also facilitate further access to the shelter, a slight ramp covered with non-slip material and applying sideways on a handrail will be provided. The external doors could have dimensions of 900X 2100 mm.



INTERNAL COMFORT

To obtain a comfortable environment for both patients and the medical staff, we thought it appropriate to introduce some special precautions, such as:

- Soundproofing of the environment through used load bearing panels
- Study of the different locations to obtain an ergonomically suitable environment.
- Division of air conditioning equipment in 3 distinct areas (2 separate locker rooms and 1 for the operating area)
- Air-exchange with the intake of fresh air drawn from the external environment
- Musical diffusion plant, either in the locker rooms or in the operating area
- Possibility to activate the lights individually to get the desired brightness level.
- Hygienic Environment suitable for the purpose and easily washable and disinfected
- Easy evacuation in case of emergency (3 doors equipped with antipanic locks)
- X-ray protection both from the outside world and from the dressing areas

MOVEMENT SYSTEM

Loading and Unloading from Vehicles

The Shelter will be equipped with a hydraulic system operated by a hydraulic power supplied from single-phase current 220 Volt, the same will allow a single operator, by the control unit with remote control, to operate the hydraulic jacks lifting, carrying the

operations of loading and unloading from trucks without resorting to external means such as cranes, bridge cranes, forklifts etc..

The plant will consist of a hydraulic power pack, oil tank, proportioning pumps, control valves, anti-burst valves, solenoid valves, stainless steel pipe system and hoses. The operator, by the control unit, may actuate the hydraulic jacks lifting even on uneven ground, provided they are compact, since the same can be actuated simultaneously, in pairs or individually, allowing to position in the shelter floor, irrespective of the conformation of soil.

Loading sequence.

Shelter closed (transport phase)



Shelter with extended jacks outwards



Shelter with extended lifting jacks



Truck placement under the Shelter

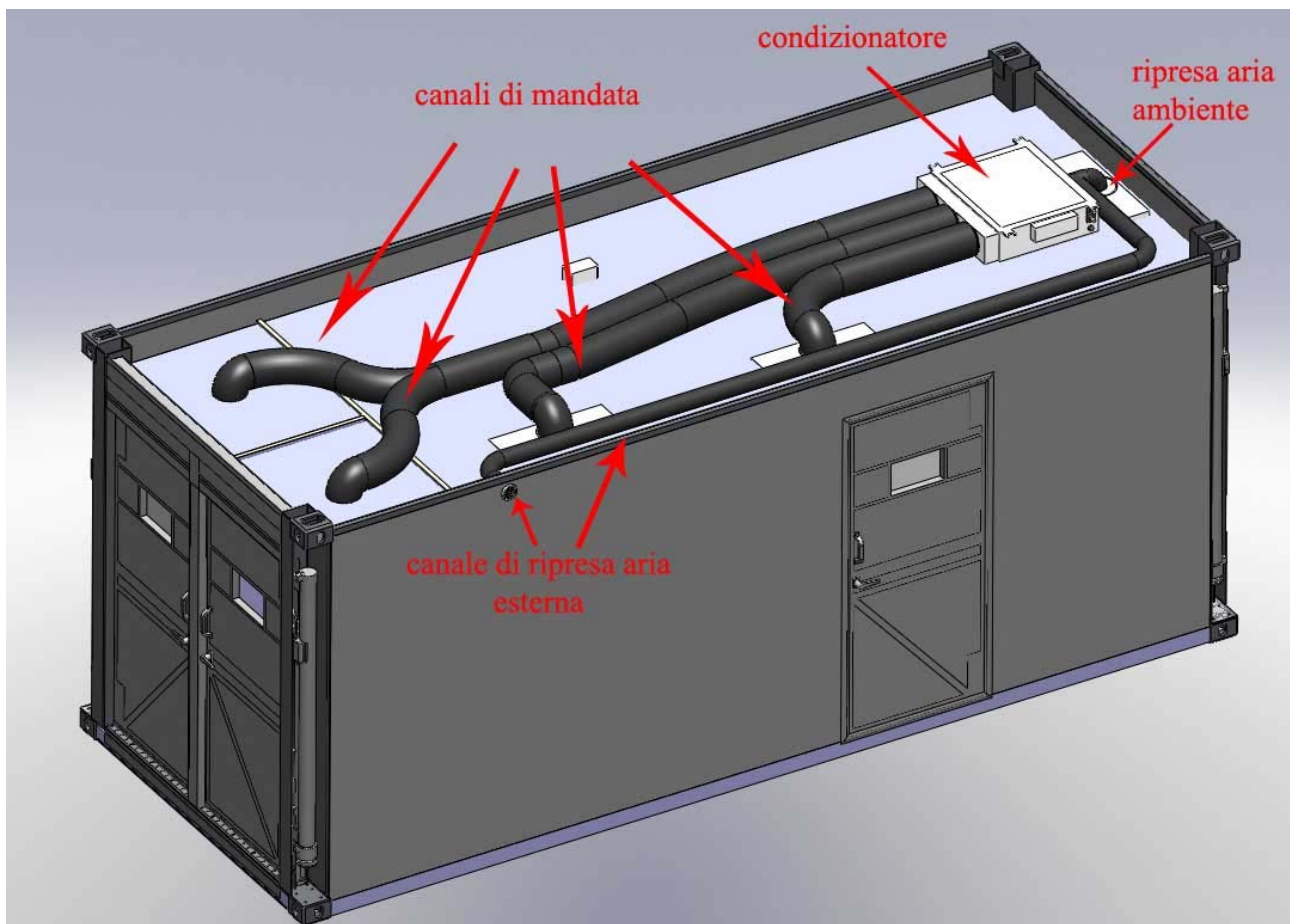


Emergency Handling

In case of emergency or damage to the engine control unit which controls the electro-hydraulic system for loading and unloading from trucks, it is possible to move the shelter with a special crane or bridge crane connecting the straps / chains of adequate capacity to the 4 upper corner blocks.

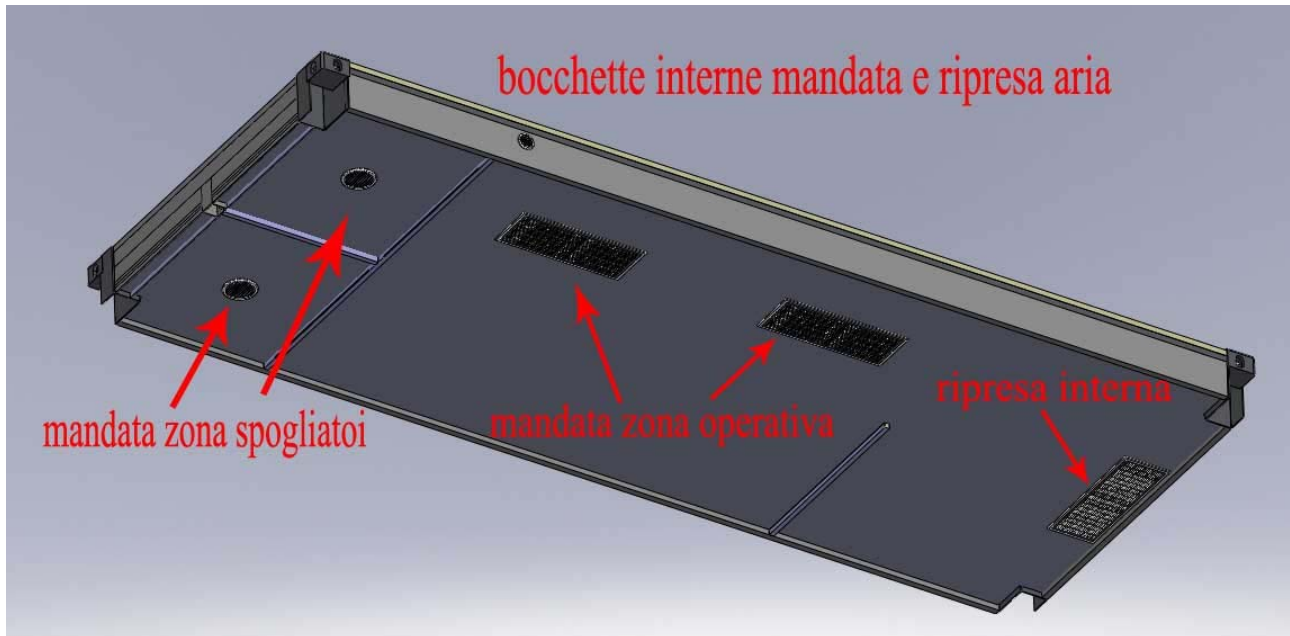


CONDITIONING SYSTEM



The shelter will be fitted with an air conditioning duct system, in order to make the passage of supply and return duct work and accommodate the speakers, is regarded as a false ceiling "dumbing down" of about 20 cm.

To optimize the air conditioning in the various sectors, air distribution will occur in 3 different areas through ceiling from anemostats D 200 mm.

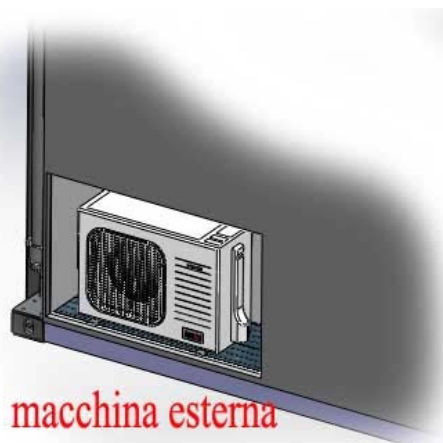


The anemostats will not only be placed in the locker rooms but also in the operating area.

To allow the release into the environment of air, a nozzle with external plug conveyed towards the resumption of the air conditioner will be applied.

The type of system used will consist of an air conditioner ducted split versions with heat pump, heating technology with low power inverters with ecological gas r. 410a, with wall-mounted remote control and a weekly program, including an air intake nozzle.

The internal unit will be placed inside the false ceiling while the external unit will be lying on the floor in the back (below the operator's workbench) inside a carefully designed compartment, airtight and soundproof with external access using stainless steel grill that allows ventilation of the unit itself.



TECHNICAL DATA

_ Power frig. In kw per Nom.	5.00
_ Cal Power. In kw per Nom.	5.60
_ Current absorbed in w. to nom	1.550
_ Power V-ph-Hz	220/240-1-50/60
_ Indoor unit Dimensions Hxwx d in mm	200-750-640
_ Dimensions Hxwx d in mm outdoor unit	569-790 (+70) -285
_ Operating limits in cold East/int	43°/ -15-32°/18°
_ Operating limits in ext/int hot	15°/-20- 30°

PROJECT MADE FOR FRILUI VENEZIA GIULIA REGION

Container in transport configuration



Container in operative configuration



Loading configuration



Entrance of the two dressing room



Internal equipment during transport



Internal equipment during operation



Operator zone

