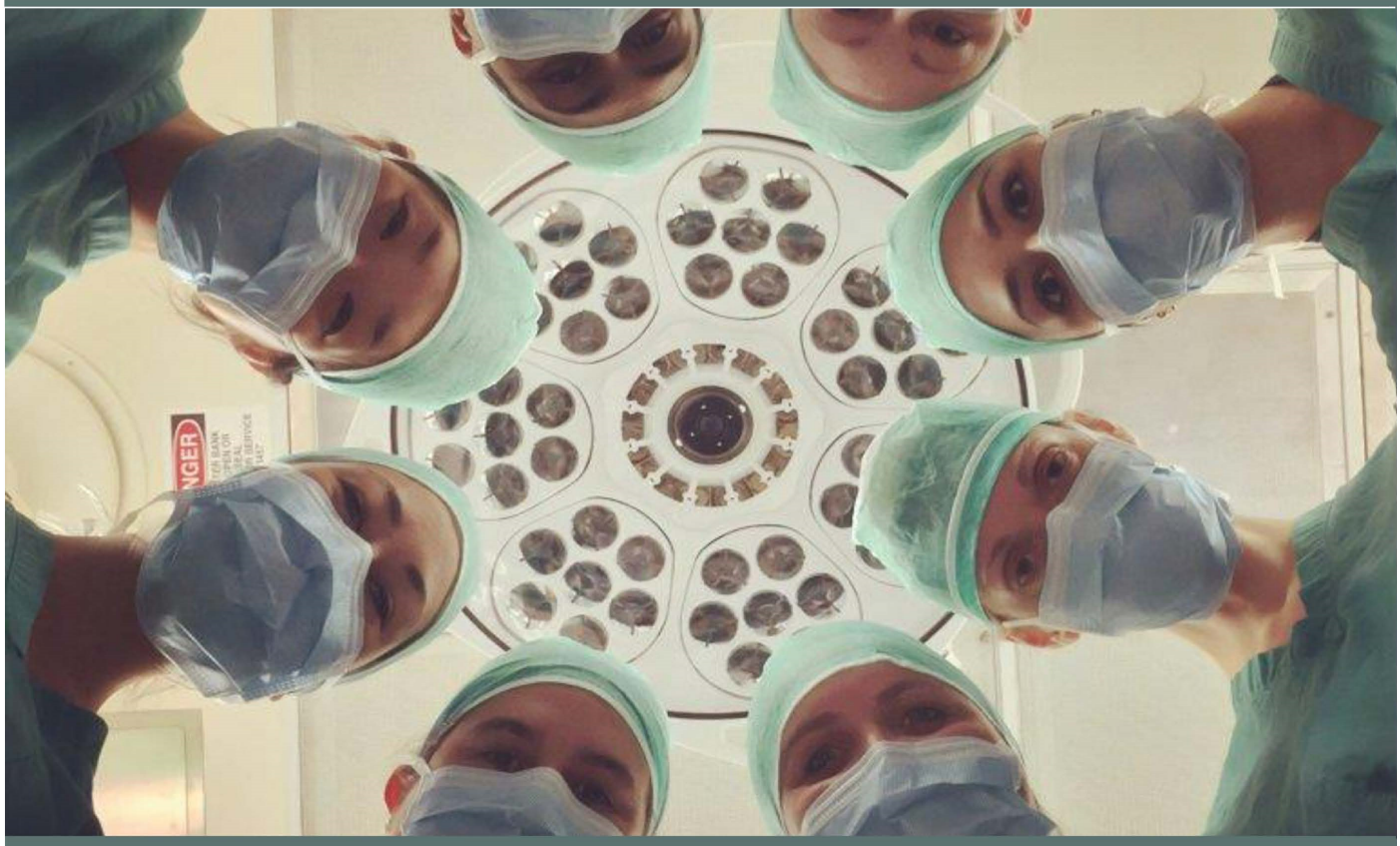
Portfolio Portugal

"we do it better"

COVID-19

MOBILE INTENSIVE CARE SYSTEM



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Av. Comendador Augusto Martins Pereira, 665, 4º, 3740-255 Sever do Vouga, Portugal

WHO WE ARE

THE COMPANY

The company, in conjunction with its partners, is an international provider of innovative solutions for various needs, including mobile hospitals and emergency intensive care units.

THE MISSION

The supply of medical equipment and facilities particularly for emergency requirements.

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MOBILE INTENSIVE CARE SYSTEM

In response to the urgent worldwide need for additional segregated intensive care capacity for Hospitals and Medical Centers to cope with the on-going COVID 19 pandemic, the company, in close collaboration with healthcare professionals, biomedical engineers and medical equipment suppliers, has developed a modular intensive care system based on shelters configured and equipped in accordance with the best biocontainment techniques.

The SYSTEM is applicable wherever emergency or additional ICU intervention is required, including the treatment of COVID-19 patients.

Each SYSTEM comprises eight "isolated" intensive care beds, one staff control and monitoring unit, one treatment unit and one connecting body.

The SYSTEM can be deployed independently using electric generators and cylinder gas supply or adjoined to hospitals and connected to mains electricity and medical gas feeds.

Shelter's physical dimensions and features make them transportable by truck, train, ship, plane; their construction features, together with the high performance of the air conditioning systems they are equipped with, make them employable in the most varied climatic and environmental conditions worldwide.

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MOBILE INTENSIVE CARE SYSTEM

General Description and Features

The Mobile Intensive Care System is designed and built to comply with strictest quality standards. Each of the modules is a prefabricated unit with the interior fitted out, floors and walls are made with coverings easy to clean and disinfect also thanks to curve profiles without edges where dirt could deposit.

Supply includes all the medical equipment typically available in an ICU environment as well as ancillary equipment such as trolleys, wardrobes, desks, chairs, refrigerators, etc.

All the devices for each bed unit can be managed and controlled remotely to help reduce the risk of contamination to doctors and nurses. The ventilation and air conditioning of the functional modules has been designed in order to maintain thermohygrometric conditions suitable for the performance of ICU treatment. The air control system prevents the recirculation of contaminated air, provides ventilation and air renewal, and maintains continuous negative pressure in all functional rooms compared to that in the central corridor, protecting the well-being of the staff and the patients.

The ease of transportation, setting-up and dismantling means that the SYSTEM is applicable to many forms of deployment. Its modularity allows interconnection of one or more SYSTEMS to flexibly extend existing departments, equipping them with additional beds for intensive care quickly, efficiently and effectively, particularly in emergency situations.

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MOBILE INTENSIVE CARE SYSTEM

Description of Modules

1) 8 X Intensive Care Modules each with a single ICU bed in a n isolated area which is divided into two sections: the filtered vestibule for the staff and the bedroom. HVAC installation is provided with HEPA filters (High Efficiency Particulate Air filters), on entry and exit, supplying both an hourly renewals of ultra-clean air and the negative pressure, i.e. the environmental conditions essential for the segregation of contagious patients. For this purpose, the filtered vestibules are fited with double, interlocked, doors . The modules are fully equipped with: ICU beds; related furniture and support equipment (such as patient monitoring systems, ICU ventilators, infusion pumps, ICU head bars, etc.); oxygen and compressed air supply circuits with standard outlets; electrical and lighting systems; uninterruptible power supply (UPS) units.

2) 1 x module for the Staff use, equipped with: Control Station displaying all the parameters of the eight wirelessly connected ICU beds; relevant medical equipment (such as defibrillator, ECG, ultrasound scanner, medicaments and drugs pumps); air conditioning system fitted with HEPA filter; electrical and lighting systems; uninterruptible power supply (UPS) unit.

3) 1 x module Shelter for Medical and Surgical Treatments, with a small operating table, shadowless lamp and other appropriate equipment. This unit is equipped with: air conditioning fitted with HEPA filter; oxygen and compressed air supply circuits with standard outlets; electrical and lighting systems; uninterruptible power supply (UPS) unit.

4) 3 x modules which connect the ten other functional modules in the form of an enclosed, air-conditioned, corridor. These units are equipped with standard electrical and lighting systems.

The footprint of each module (width 2.40 m, length 6.10 m) is substantially equivalent to a 20 feet ISO container; this is in order to ensure the ease of transportation and intermodal transfer. The internal, finished, height of the modules is 2.70 m.

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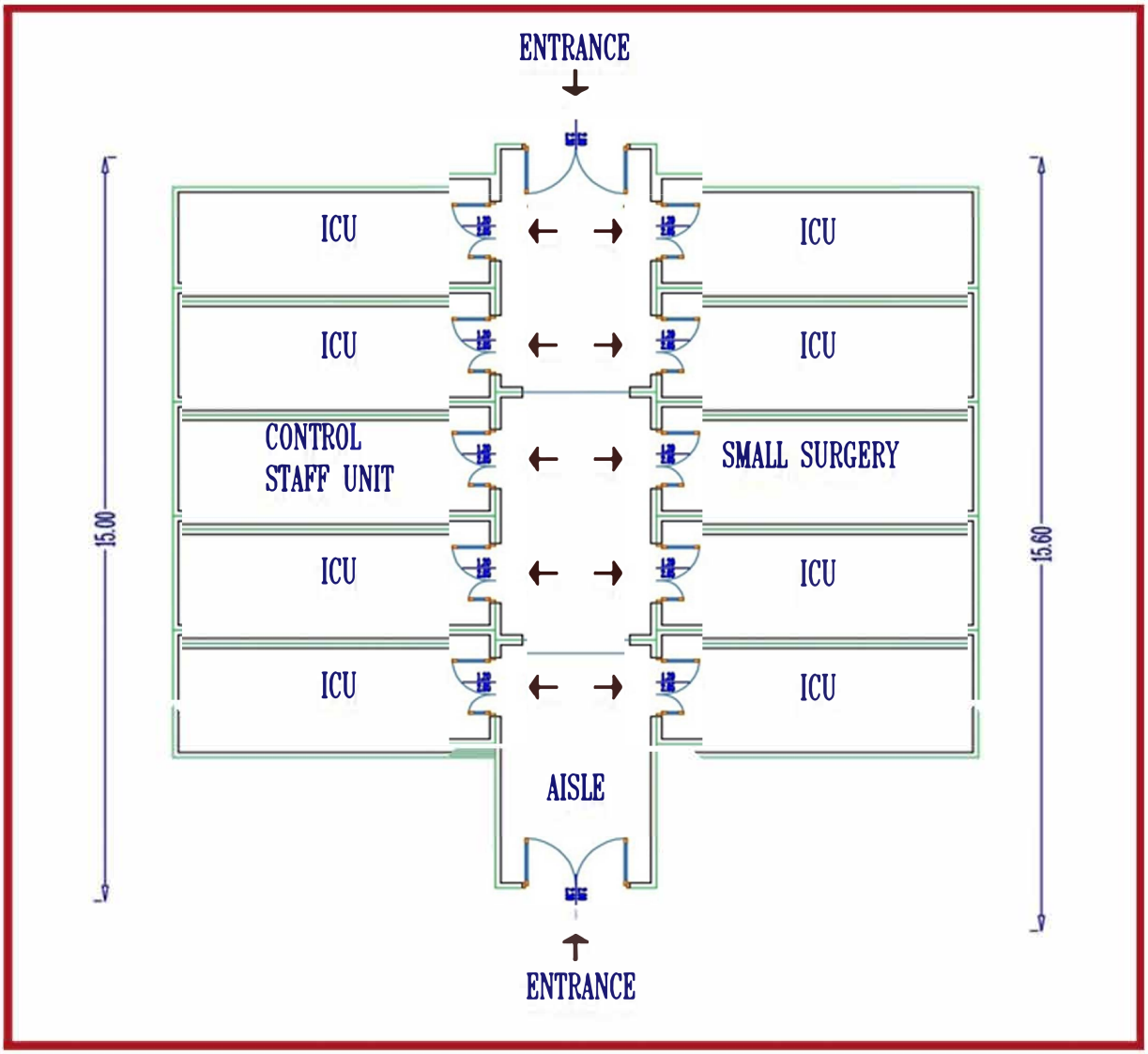
LAYOUT

The thirteen shelters (8 ICUs one bed each, 1 Staff and Control Unit, 1 Medical and Surgery Unit, 3 Connecting Units) are arranged as follows:



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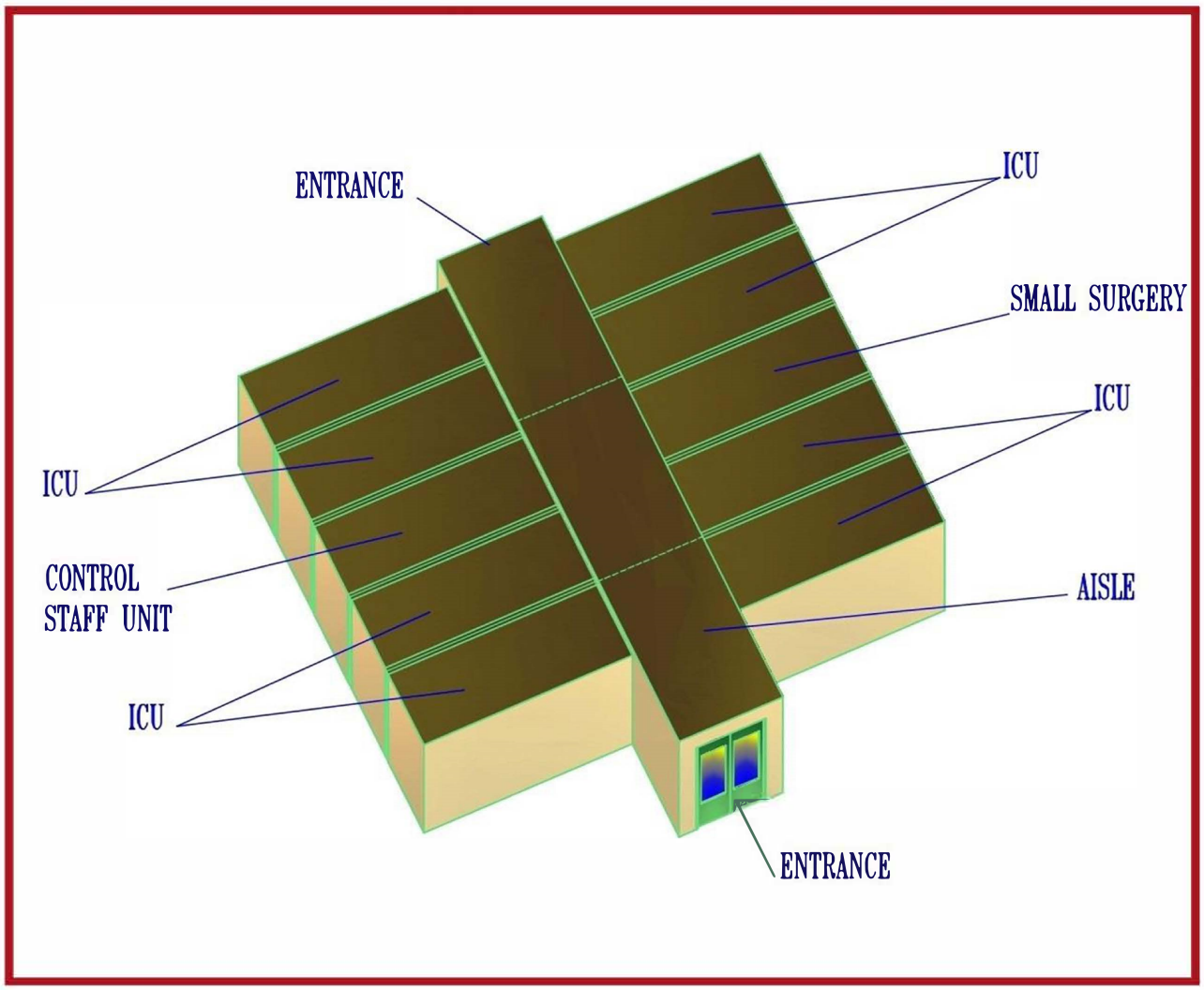
LAYOUT



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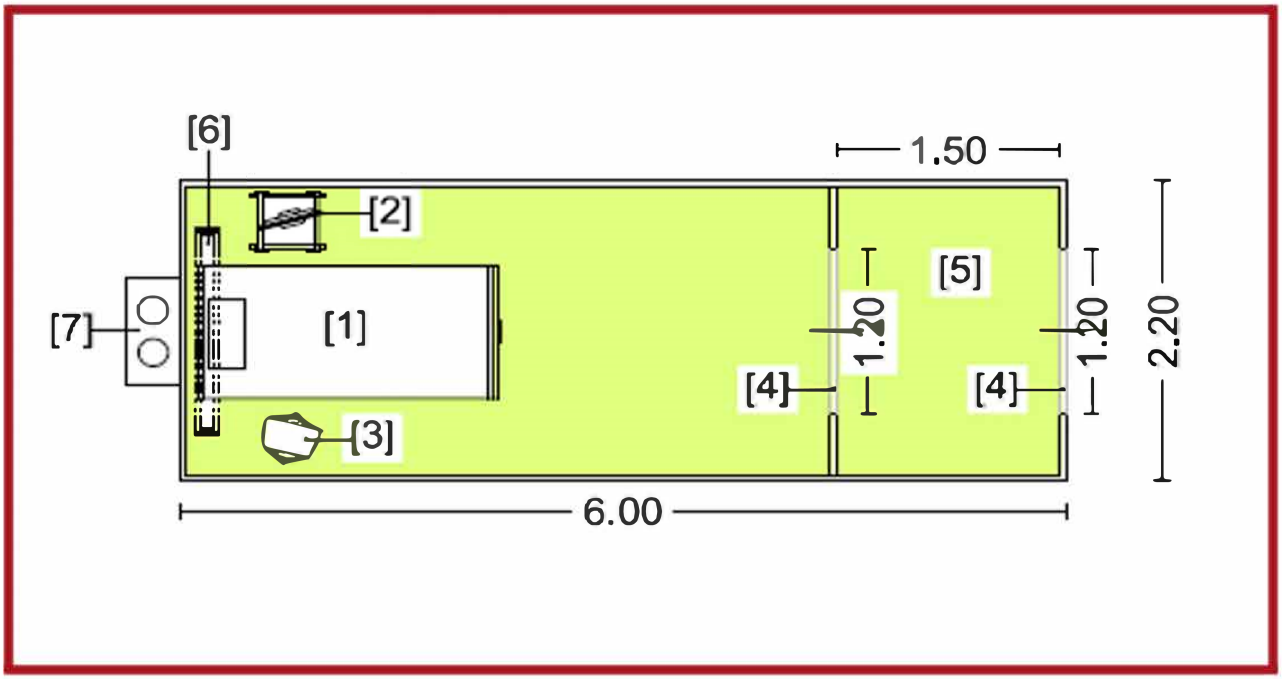
RESUSCITATION ROOM



[1] Resuscitation bed
[2] Monitor vital signs
[3] Pulmonary ventilator
[4] Doors
[5] Filter room for staff
[6] Equipped bed head
[7] Medical gas cyilnders

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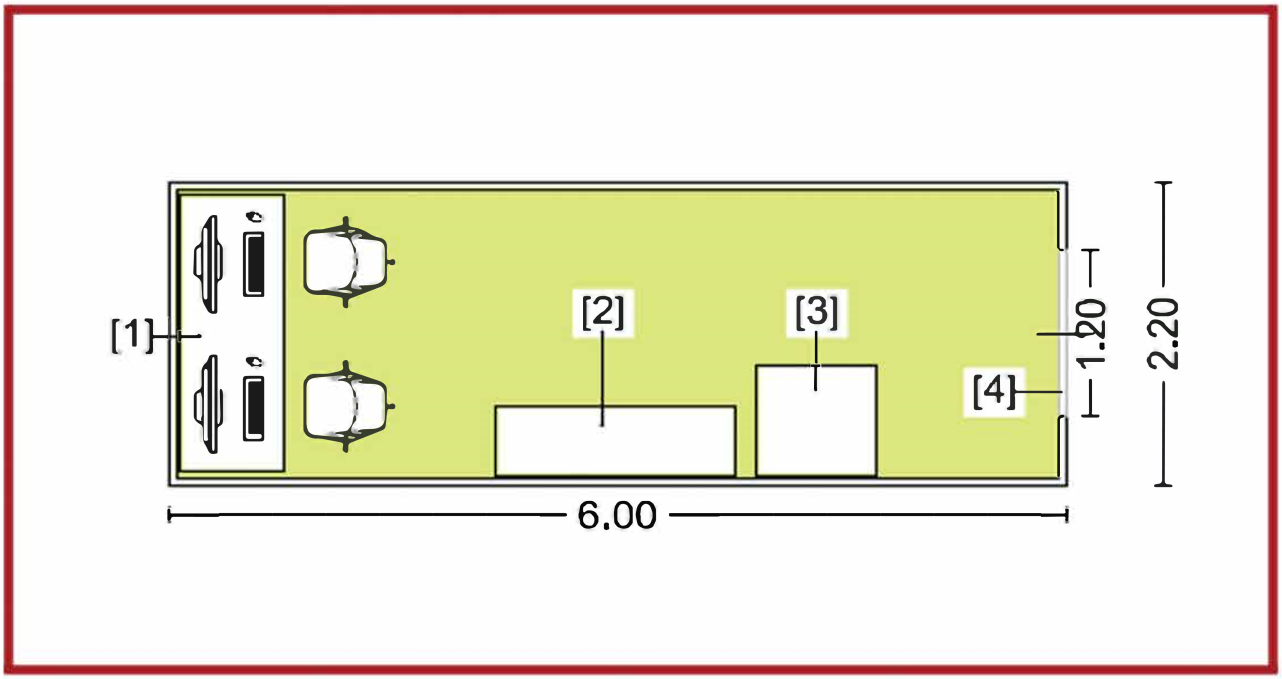
CONTROL AND STAFF UNIT



[1] Counter with bed control unit
[2] Counter
[3] Fridge
[4] Door

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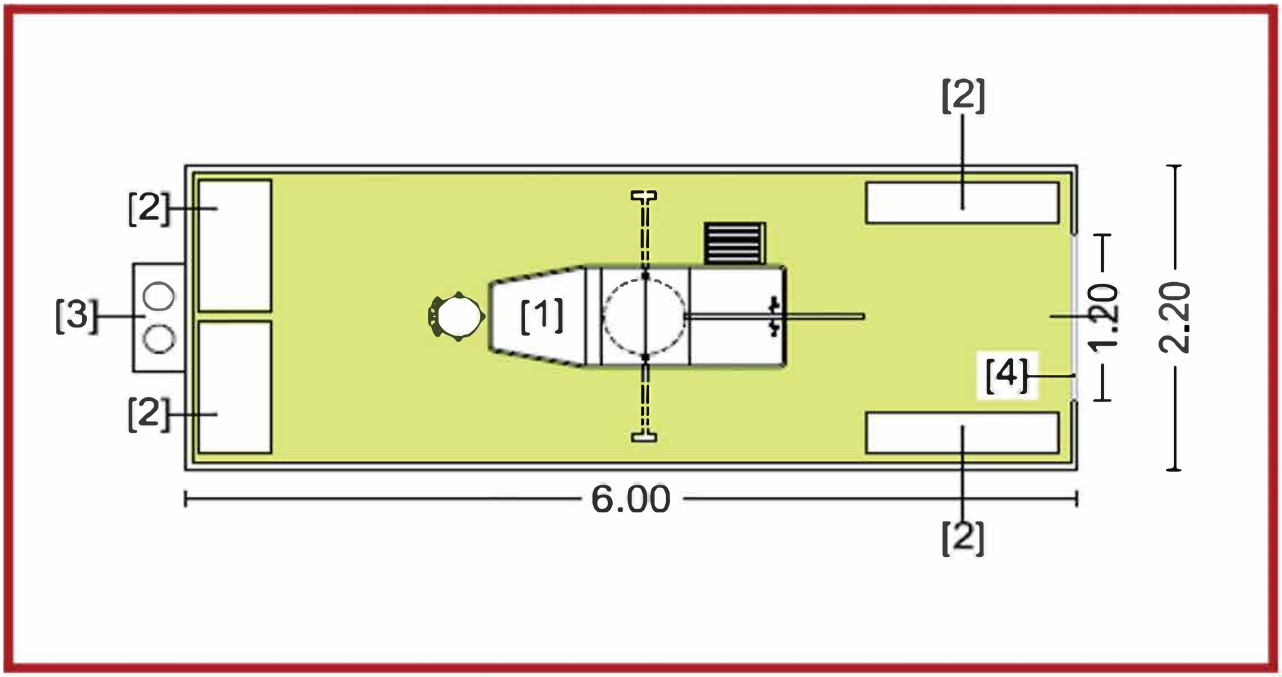
SMALL SURGERY ROOM



[1] Operating bed
[2] Wardrobes
[3] Medical gas cylinders
[4] Door

Special arrangements and/or equipments can be supplied on demand as for instance increase of bedunits, autonomous supply systems of oxygen and compressed air, satellite communication system, etc.

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