BLAST&BALLISTIC RESISTANT CONTAINER - RBCELL SYSTEM

RB3S

Steel Structure Systems

EXPEDITIONARY DESIGN

The cell is designed using light weight materials for the ease of transport. It can be supplied as an assembled base unit or as a "flat packed" system that can be erected by local tradesmen without any requirements for heavy construction equipment. This is achieved by a specially designed structural folding frame. Once the shelter frame structure has been created, the protective envelope is then installed.

MAXIMAL BLAST AND BALLISTIC PROTECTION

The cell structure is designed to provide the maximum available protection against Blast and Ballistic threats.

The ballistic protection is achieved by the use of ballistic layers that are embedded inside the composite panel. The exact level of protection is determined by the client and will be incorporated in the panel design.

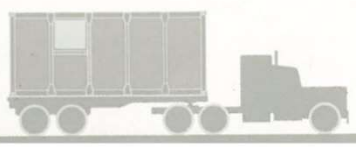
The blast protection of the shelter is achieved by the use of a unique and proprietary energy absorbing sub-frame system. This system absorbs a significant part of the energy transferred to the structure by the blast and absorbs it by deflection and movement, thus significantly reducing the forces transferred to the shelter structural frame. This technology has been proven over the last five years in dozens of UK/US recognised full scale tests and is widely implemented worldwide.

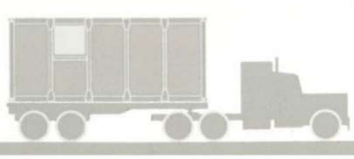
ENHANCEMENT OF THE PROTECTIVE MEASURES

The cell protection capabilities are designed to be upgraded at any stage of it's life to meet ever changing and emerging threats. This can be achieved by various modular components designed to be integrated on the base structure. These include an "overhead" initiation module that will enable the shelter to resist direct hits of rocket and artillery shells. An optional side panel initiation screen that will provide protection against Anti-Tank shaped charges and other shoulder launched weapons, can be installed.

SUSTAINABLE DESIGN AND MATERIALS

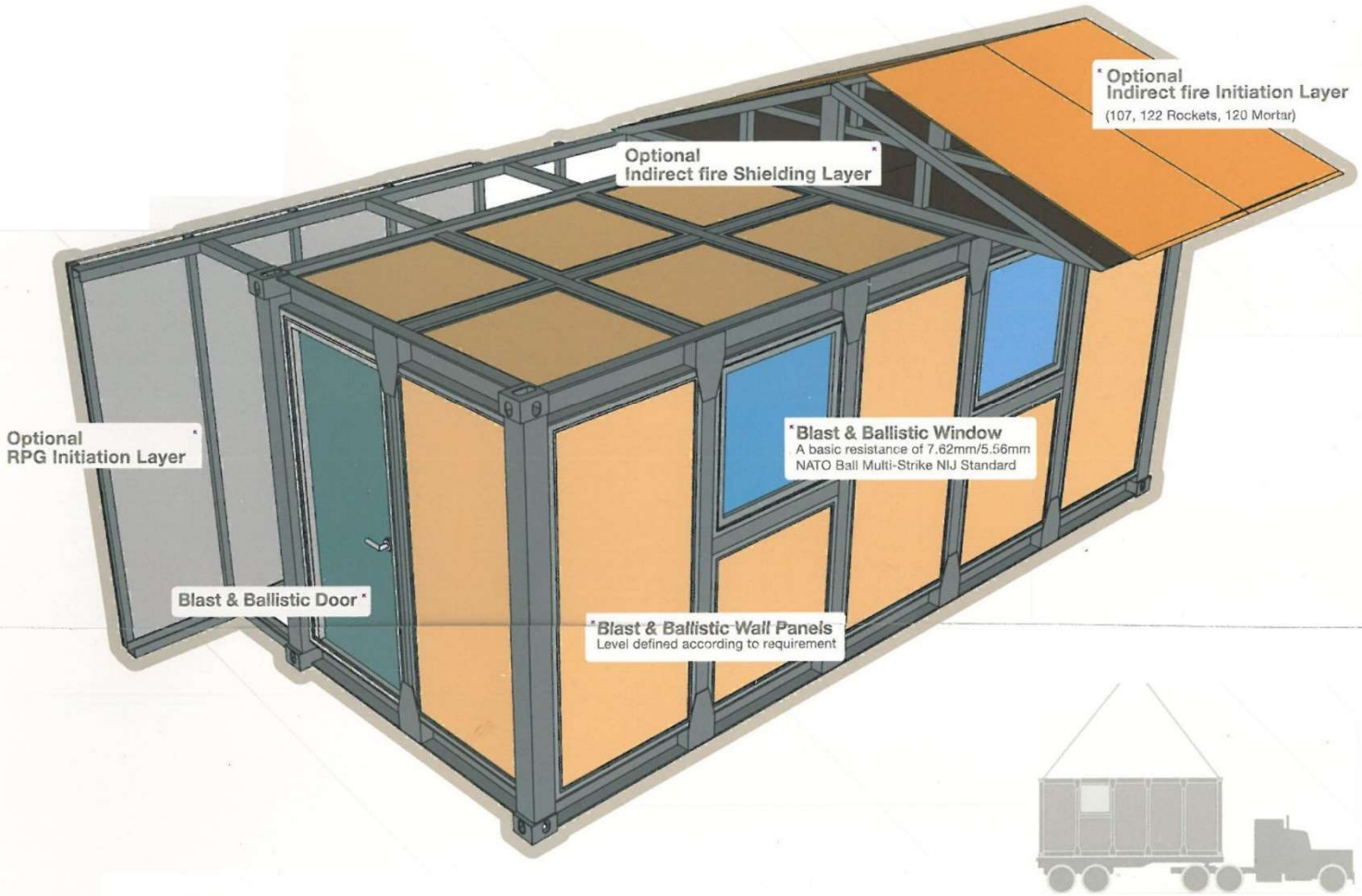
The envelope is made out of lightweight unique composite panels that provide excellent thermal, acoustic and fire resistant properties by the use of proprietary developed material that form part of the composite panel. The systems is dedicated to using environmentally friendly processes and materials that have a high degree of reusability. Damaged panels can be returned for recycling and reuse to ensure limited impact on the environment. Many containerised accommodation units utilise polyurethane foam as the insulation layer which gives off toxic gases during combustion. The cell uses materials which have a high degree of fire resistance and are not life threatening. Efficient insulation is created without compromising safety or the environment.





BLANST&BALLISTIC RESISTANT CONTAINER - RBCELL SYSTEM

The flexible architecture of the system has been specifically designed to meet the ever changing requirements of the customer. From the protective outer shell to the internal layout, it can be as adaptable as needed to fulfil the function. If needed, it can be adapted at a later date to either change its use or to increase the protection level.



TESTED & CERTIFIED AGAINST

	A Small / medium calibre projectiles	B Shoulder launched weapons /	C Battlefield rockets, Artillery and Mortars	D Small / Personnel-borne IEDs	E VBIEDs
5	Automatic cannon 30 mm APDS	Advanced ASM Anti Structure Munition	155 mm artillery 122 mm rocket	Bag / Suitcase 20 kg TNT	Heavy truck / similar > 4000 kg TNT
4	Heavy machine gun 12.7 – 14.5 mm AP	Anti-tank Shaped charge	120 mm mortar 107 mm rocket	Body-borne device 9 kg TNT, fragments	Medium truck 4000 kg TNT
3	Assault / Sniper rifle 7.62 mm AP WC	Anti-personnel Thermobaric charge < 2.5 kg / Conventional	82 mm mortar	Large briefcase 9 kg TNT	Van 1500 kg TNT
2	Assault rifle 5.56 – 7.62 mm AP	40 mm Rifle grenade Shaped charge	60 mm mortar	Package 1.5 kg TNT	Passenger vehicle 400 kg TNT
1	Assault rifle 5.56 – 7.62 mm Ball	(Reserved)	Hand grenade	Letter bomb 0.125 kg TNT	Motorbike 50 kg TNT

TESTING & CERTIFICATION

All cell has undergone continuous testing and development in live fire exercises to ensure its reliability. These tests have been conducted with and in accordance to those standards approved by NATO, US TSWG and UK MOD amongst others. Pressure gauges are used to simulate the damage caused to the human body. All cell survived the most severe tests with little or no over pressure and absolutely no spalling. The effectiveness of the design has been proven to minimize injury and loss of life.

Full performance certification of the design is provided by a third party specialist architects and engineers

Pictures from high speed video recording during the full scale test

PROPRIETARY DESIGN

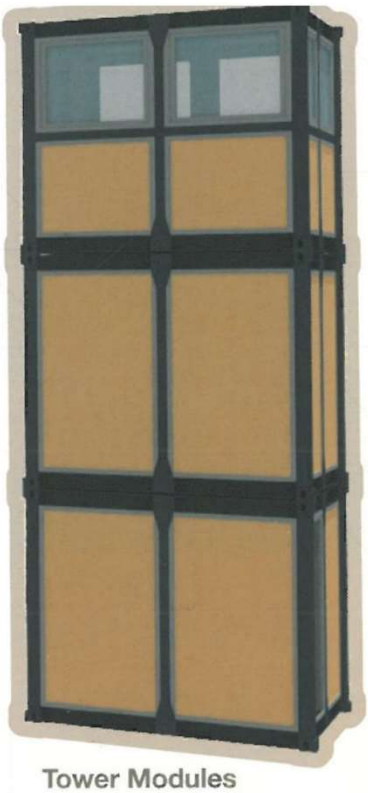
All cell unique performance is attributed to innovative blast energy absorption technologies and specially developed materials. All cell cell components, materials and their applications are proprietary and protected by numerous registered international patents.

BLANST&BALLISTIC RESISTANT CONTAINER - RBCELL SYSTEM

MODULE CONFIGURATIONS

Single Storey Modules

Multi-Storey Modules



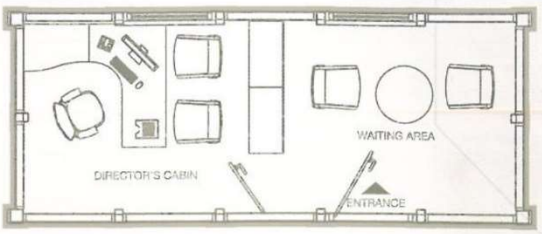
Tower Modules

APPLICATIONS

The design architecture allows the customer to utilize the base element in a multi-cluster configuration to achieve larger and more sophisticated space configurations. Typical deployed designs include:

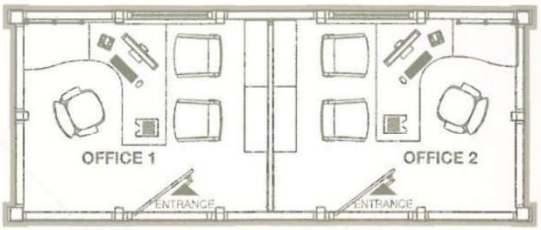
- Offices
- Accommodation
- Medical Facilities
- Dining Facilities
- Command & Control rooms
- Communications & IT (Servers etc) protection at temporary sites.
- Border Security/Customs Posts
- Guard Posts
- Guard Towers
- Entry Control Points Screening Rooms

info@rbgroup.com.tr • www.rbgroup.com.tr



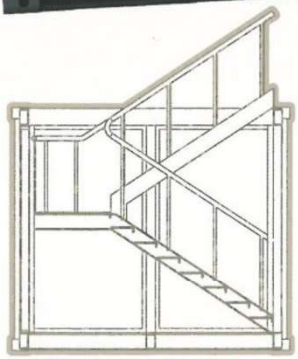
PLAN | **TYPE-PD/LO***

- Pre-designed Office Module.
- Self contained office units for different levels.
- Includes workspace & waiting area



PLAN | **TYPE-PD/EO***

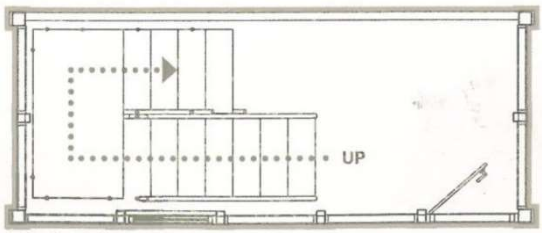
OFFICE MODULE



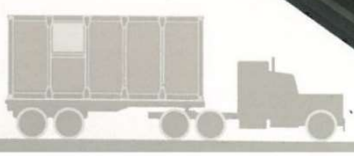
TYPE-PD/S10*
SECTION

- Pre-designed Staircase Module.
- Different unit sizes for compact block and one with landing.

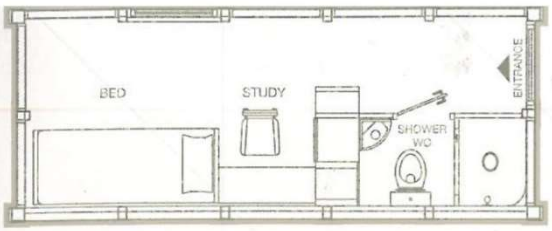
STAIRCASE MODULE



PLAN | **TYPE-PD/S20***

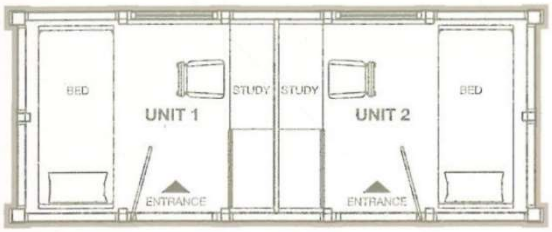


BLANST&BALLISTIC RESISTANT CONTAINER - RBCELL SYSTEM



PLAN | **TYPE-PD/LA***

- Pre-designed luxury accommodation.
- Self contained module for 1 person.
- Includes Sleeping area, Study, Storage Shower & WC

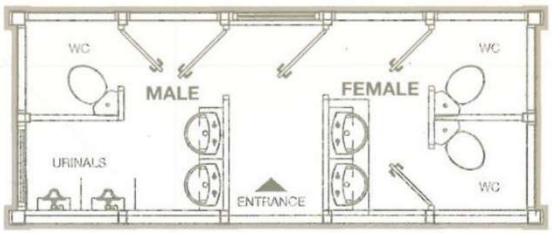


PLAN | **TYPE-PD/EA***

- Pre-designed economy accommodation.
- 2 Self contained modules for 1 person each.
- Includes Sleeping area, Study, & Storage.

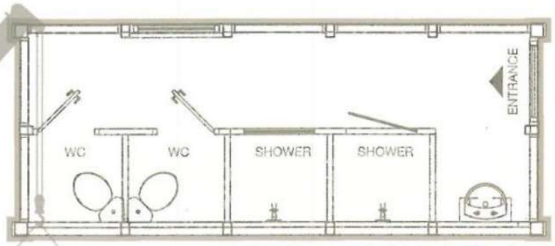
ACCOMMODATION MODULE

SANITARY MODULE

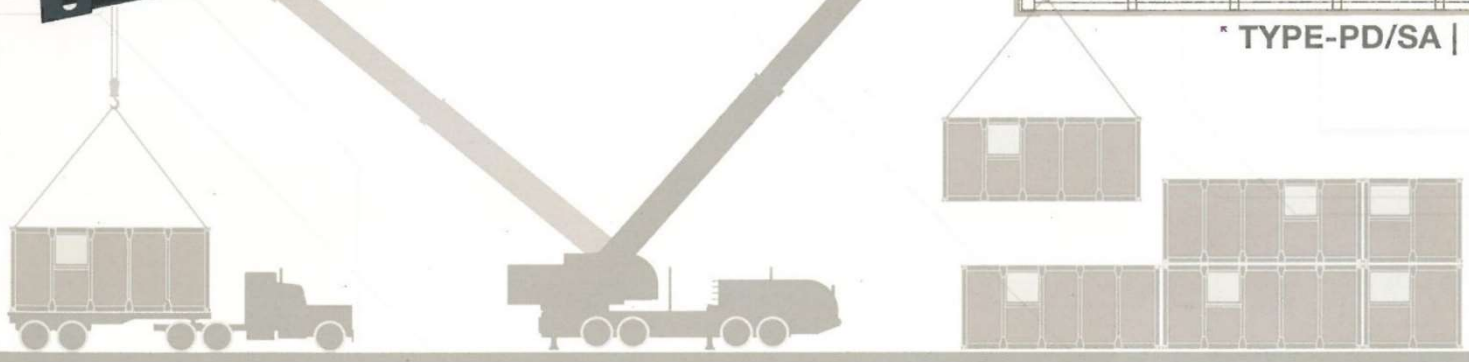


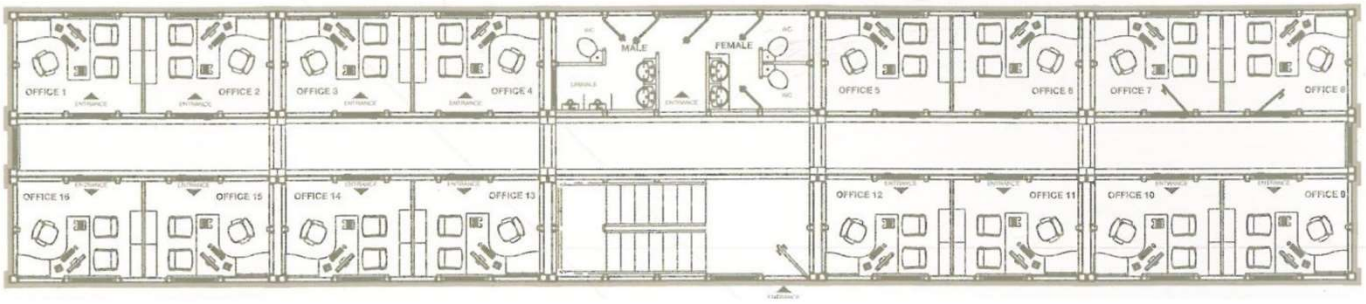
* **TYPE-PD/SO** | PLAN

Pre-designed Sanitary Module.
2 different types to be a part of accommodation or work blocks.



* **TYPE-PD/SA** | PLAN

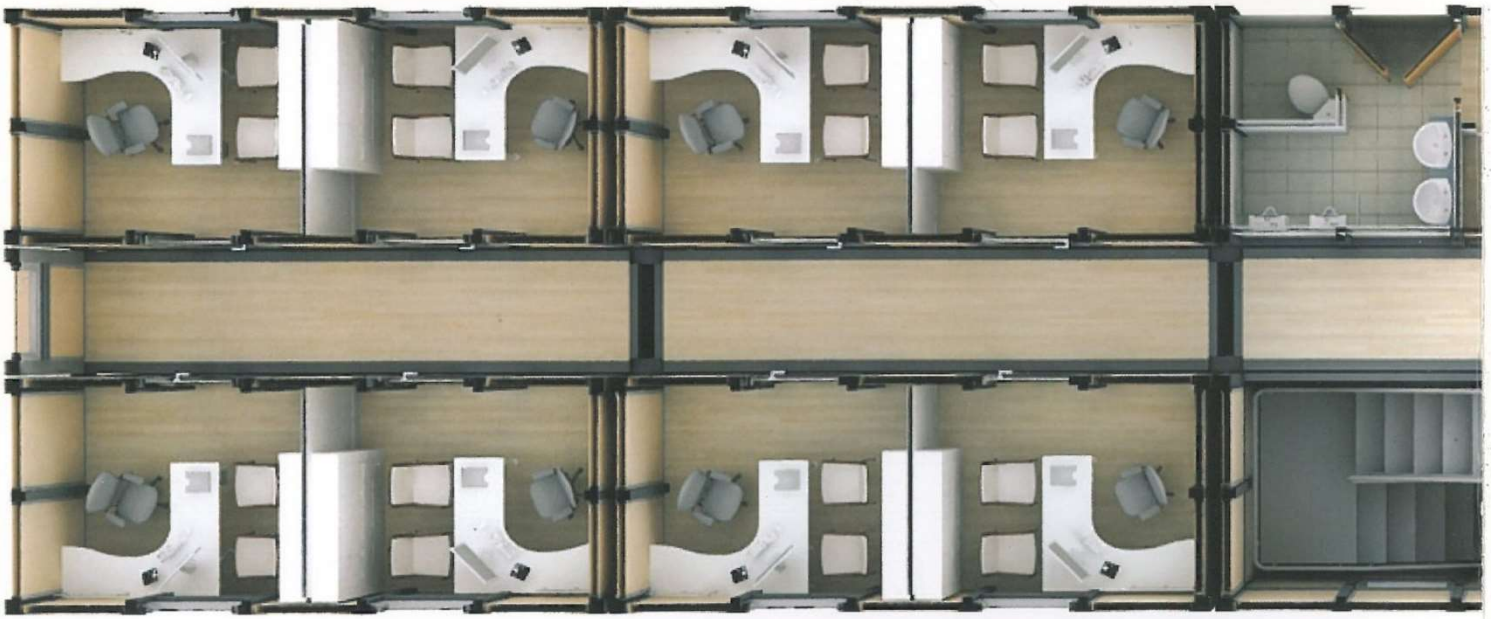


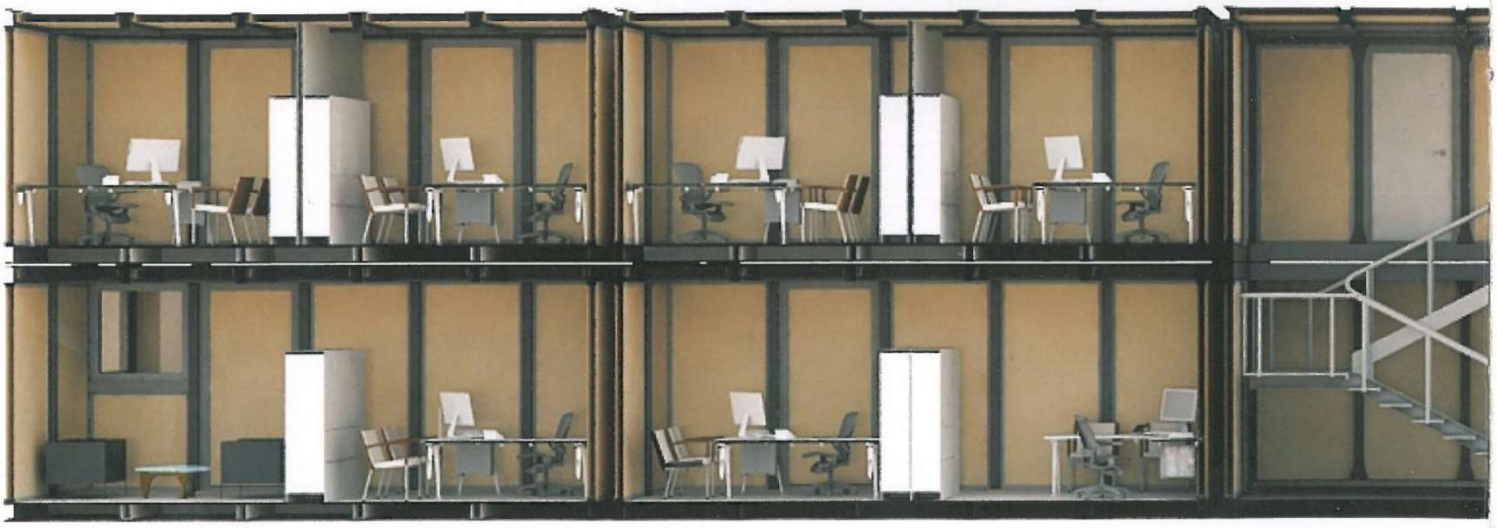


TYPICAL PLAN

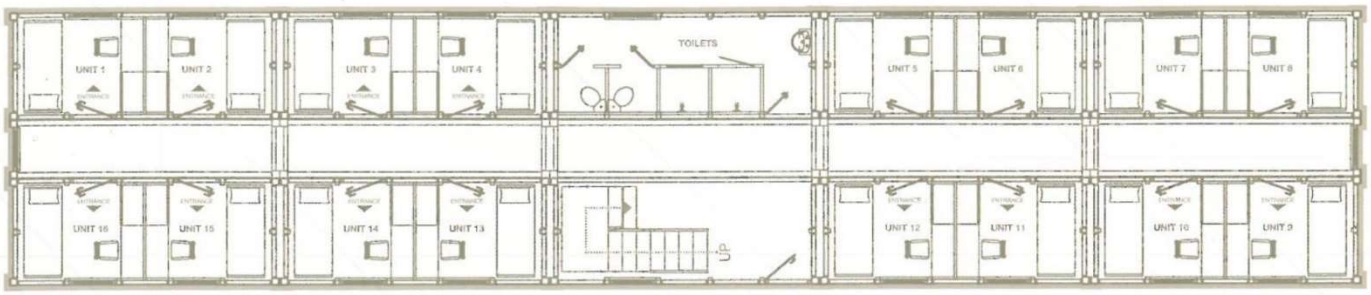
- A multi-storey office block .
- Full office facility using 8 Type-PD/EO modules, 1 Type-PD/SO toilet module & 1 Type-PD/S20 staircase module on each floor.

MULTI - STOREY OFFICE FACILITY





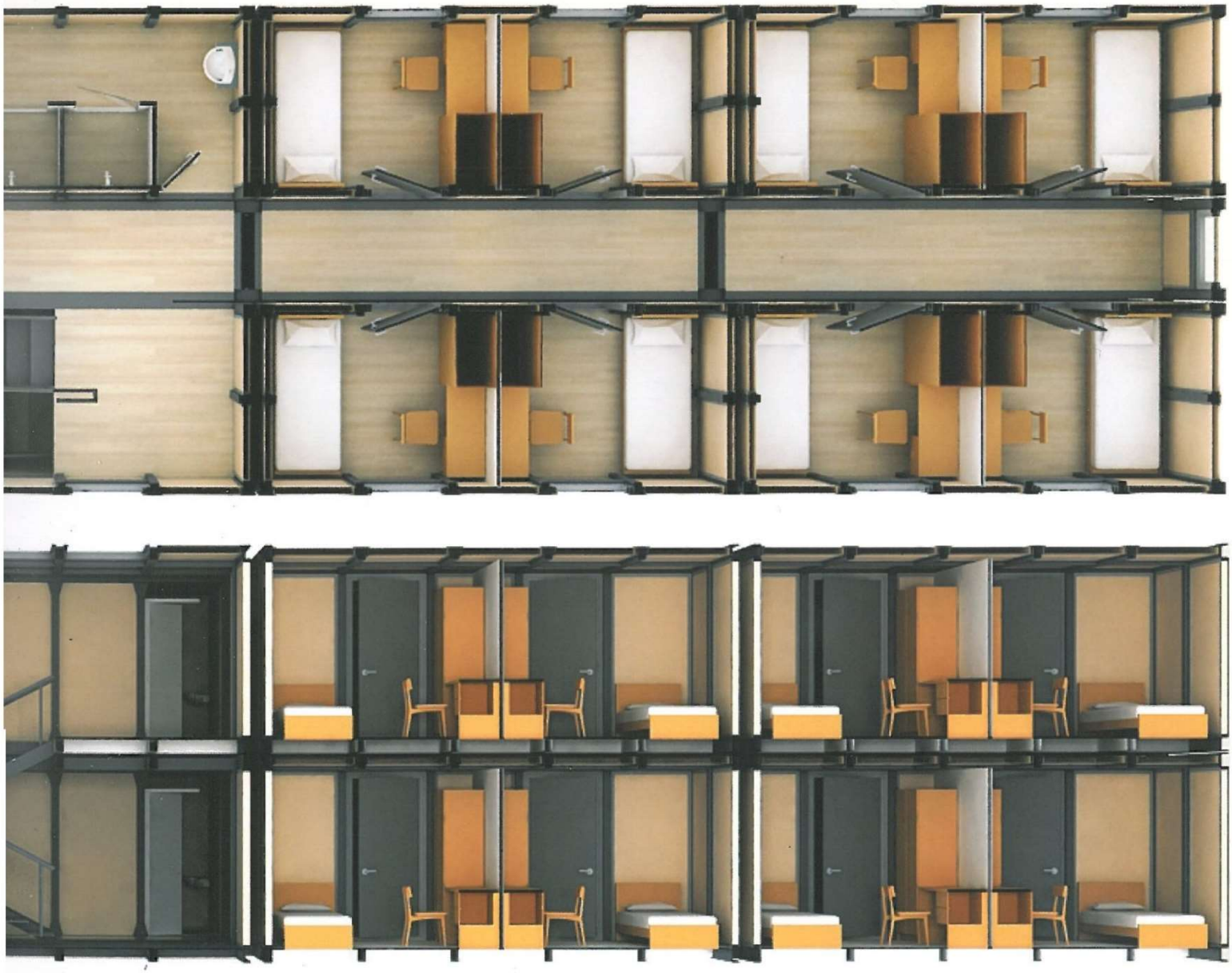
BLANST&BALLISTIC RESISTANT CONTAINER - RBCELL SYSTEM



TYPICAL PLAN

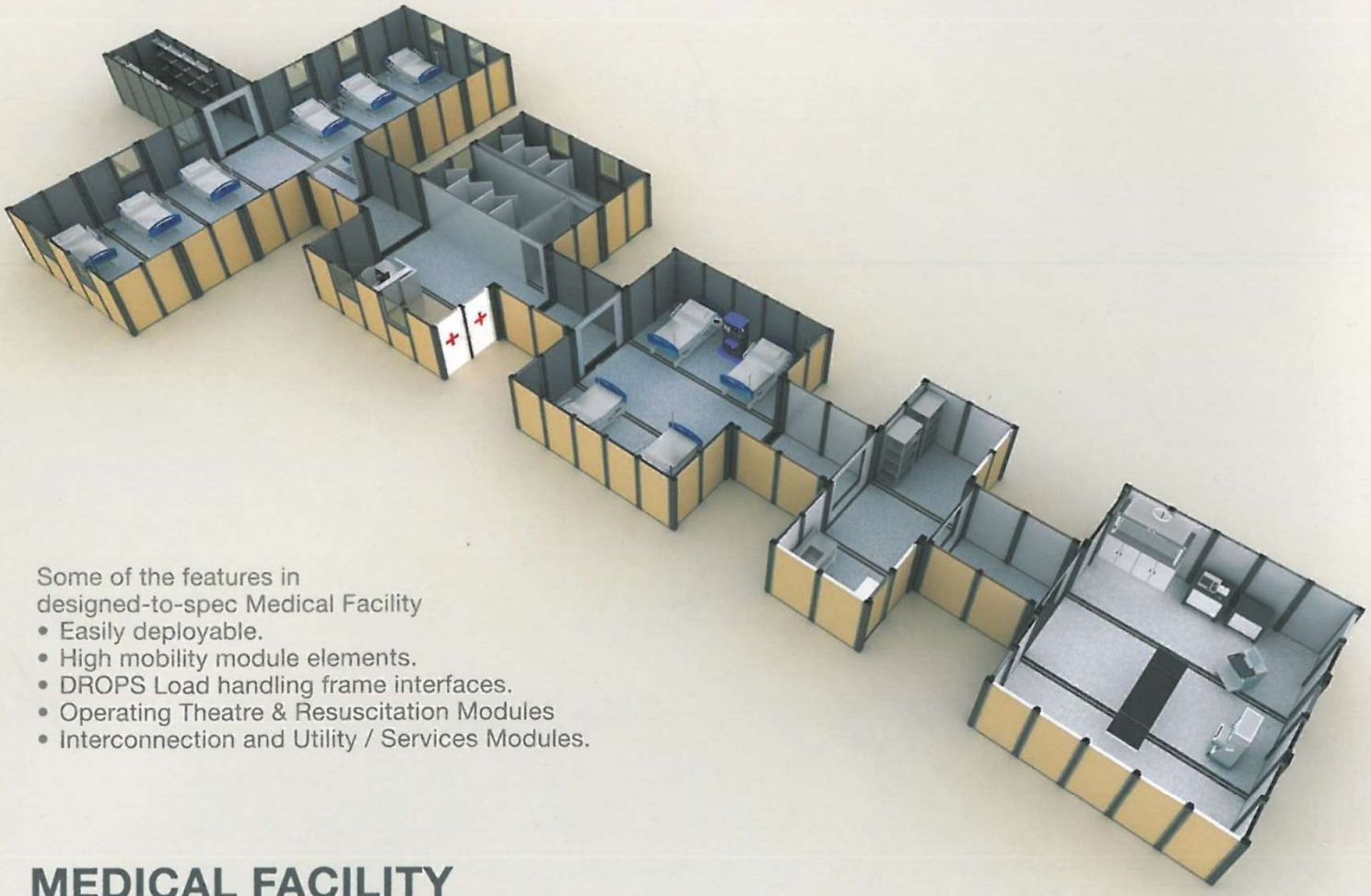
MULTI - STOREY ACCOMMODATION

A multi-storey accommodation block
Full self contained accommodation using 8
Type-PD/EA modules, 1 Type-PD/SA toilet module & 1
Type-PD/S20 staircase module on each floor.



info@rbgroup.com.tr • www.rbgroup.com.tr

PLAN | **GROUND FLOOR**



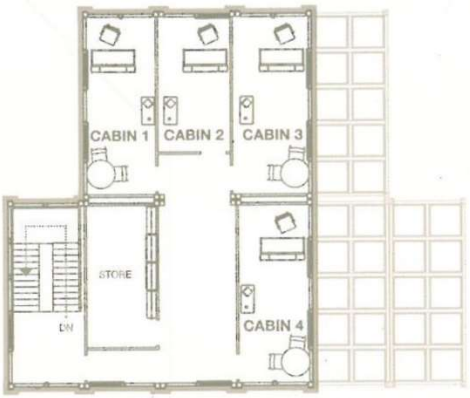
Some of the features in
designed-to-spec Medical Facility

- Easily deployable.
- High mobility module elements.
- DROPS Load handling frame interfaces.
- Operating Theatre & Resuscitation Modules
- Interconnection and Utility / Services Modules.

MEDICAL FACILITY DESIGN

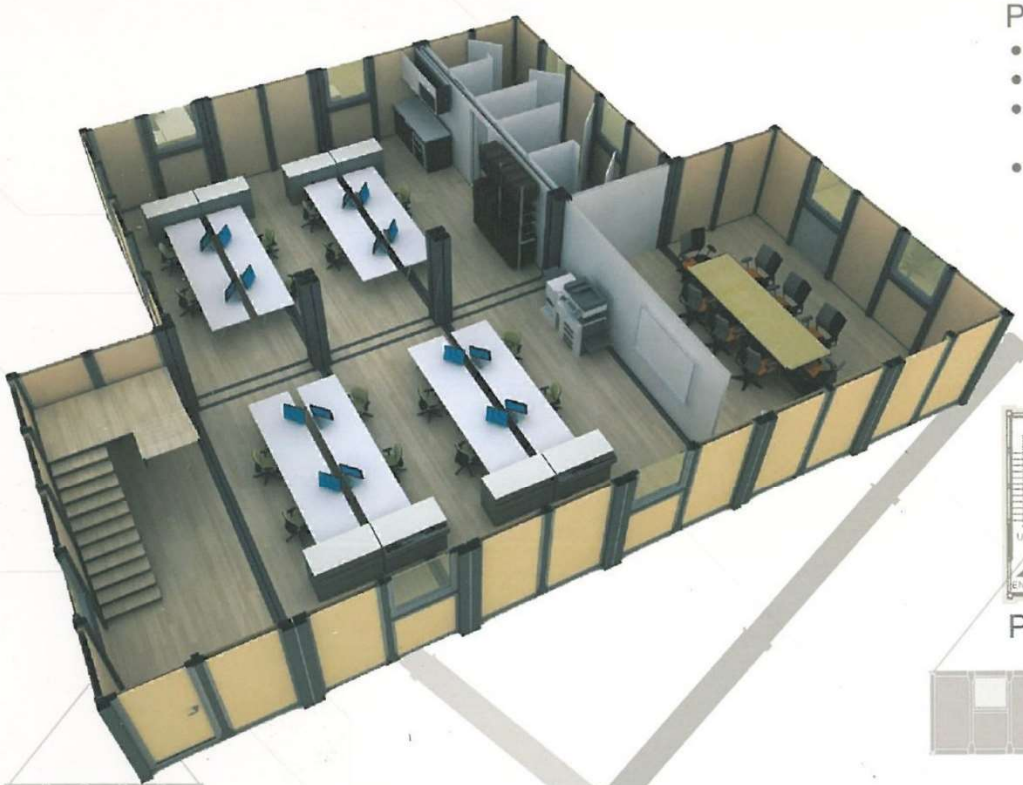
BLANST&BALLISTIC RESISTANT CONTAINER - RBCELL SYSTEM

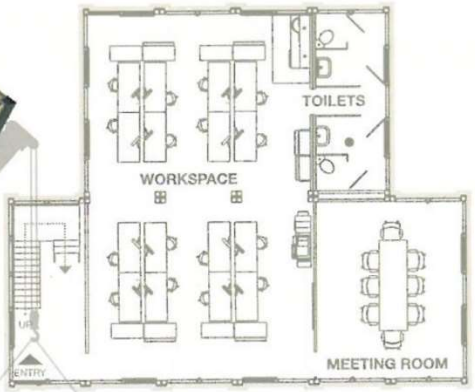
MULTI-STOREY OFFICE DESIGN



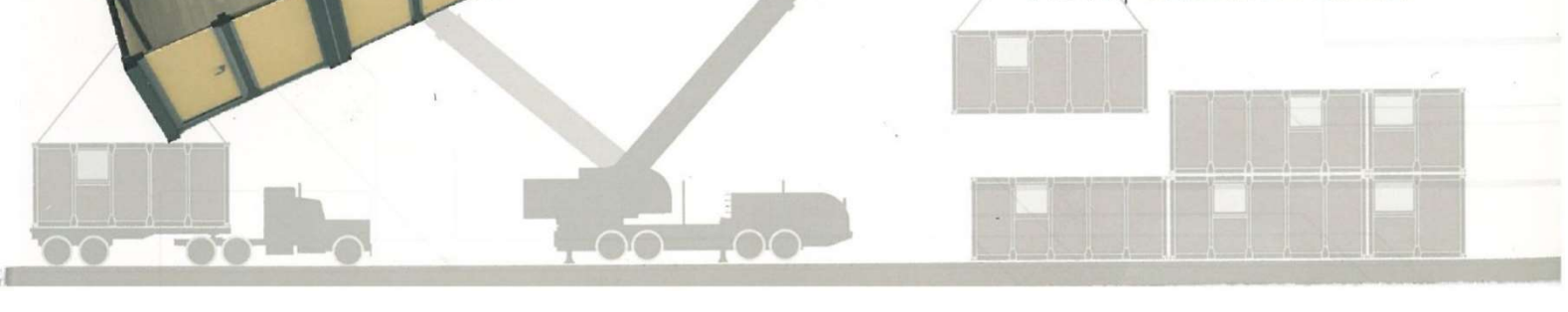
PLAN | **FIRST FLOOR***

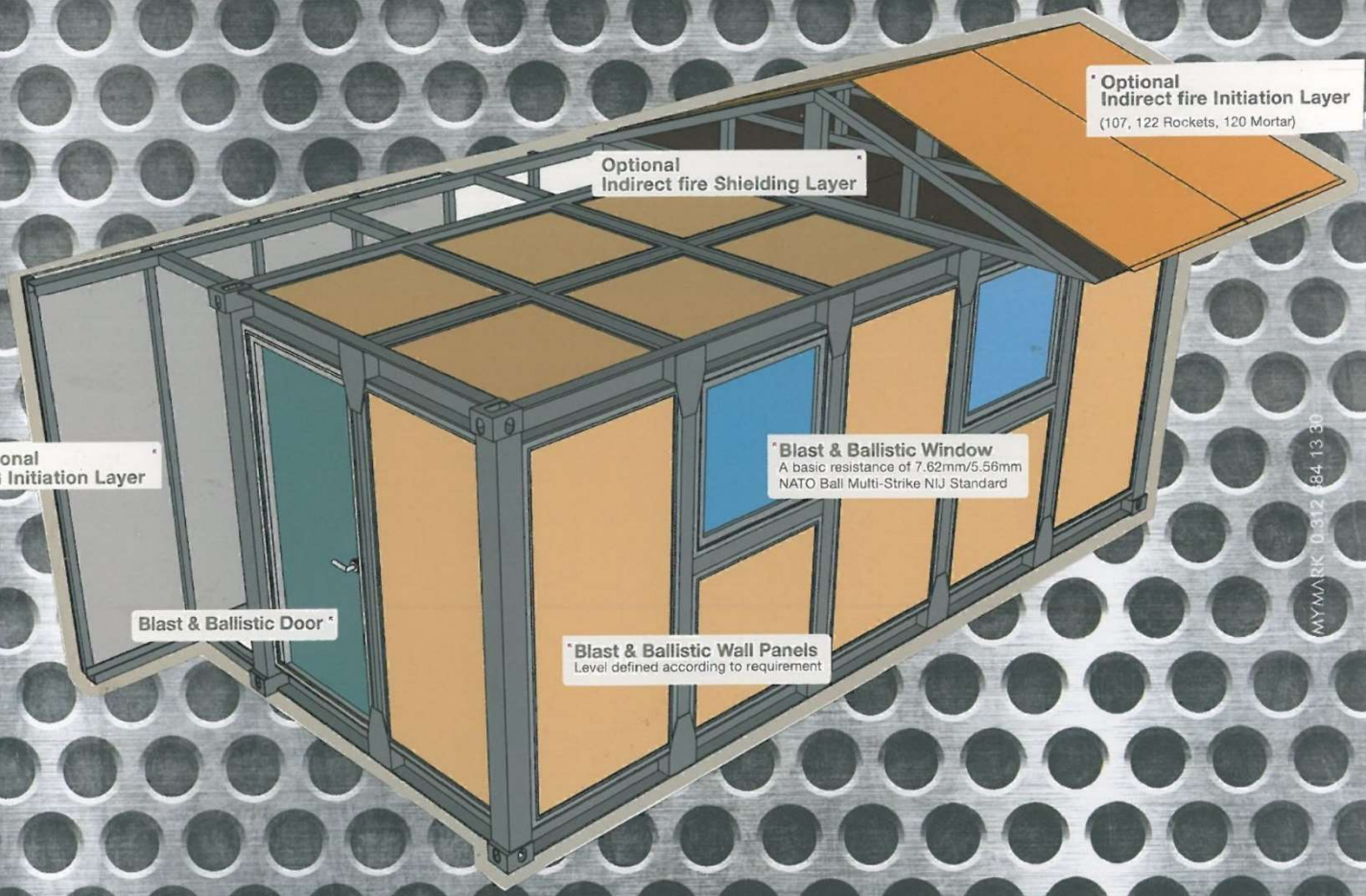
- Design to spec office design
- Fully functioning office space
- Includes open plan workspaces, meeting room, individual office cabins & toilets.
- Provides office space for 20 people.





PLAN | **GROUND FLOOR***





MYMARK 0 312 84 13 3

RB3S

Steel Structure Systems

info@rb3s.com.tr

www.rb3s.com.tr

RB3S R&B Group www.rbgroup.com.tr tescilli markasıdır.