



Independence Energy  
l'indépendance énergétique  
Independencia energética  
Indipendenza energetica

*Sun, Water, Wind, Ground and Tides the unique energy sources to rescue the Earth*

## **DIALYSIS MOBILE UNIT**



### **DIALYSIS UNIT**

The solution that we propose is based on the experience acquired during the previously mentioned NATO/UN missions and liaison with Italian and other country soldiers who took part in these missions, performing more than 5,000 different type of operations and tests.

This particular Dialysis Facility is specially designed to provide premium dialysis care to patients suffering from renal disease. Critical renal hemodialysis treatment can be performed efficiently and effectively in this small, yet roomy, 20' (6M) mobile dialysis vehicle

These SHELTER provide the required interior working space for all of the required equipment, supplies, and personnel. Inside this facility there are two (2) patient dialysis treatment stations, a water treatment room, and a nurse's station.

**INDENER - no for profit association**

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The DIALYSIS external dimensions is comply with ISO 20" 1C standard, and don't need any special trucks for its movement.

The upper corner blocks are made of special shaped steel profiles, which enable also the lifting and the moving of the containers with bridge cranes or cranes. The corner joints are resistant to deformation during transport.

The container corners are adequately resistant to lifting, moving, suspension and fastening during transport.

The fastening of the containers to the truck flatbeds is to be carried out by means of the specific Twist-Lock mounted on the flatbeds (ISO regulations) or with belts and belt tensioning devices.

**Each Shelter is equipped with its own hydraulic fluid system which enables a single operator to perform the following operations, using the push-button panel to work the 4 hydraulic lifting jacks, which can be operated synchronously, in pairs or individually.**

**This system makes it possible to position the Shelter in areas where the terrain is rough and unlevelled.**

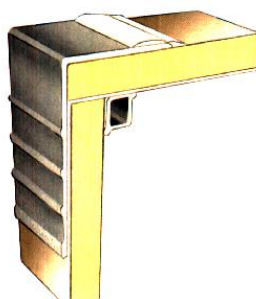
**The electrohydraulic system which activates the hydraulic jacks is powered by 24 volt batteries or by electric net. This enables the above mentioned operations to be performed autonomously, without the aid of cranes, bridge cranes or fork lift trucks.**

## STRUCTURE OF THE CONTAINER

The base and perimeter structure is made from anticorodal extruded aluminium sections; tubular steel pieces are fitted at the lower and upper ends of the structure to allow the lower and upper corner blocks and the containment C of lifting jacks to be welded onto the structure.



## WALLS AND ROOF



This container is built in steel/polyurethane/steel with the sandwich technique. The walls and roof are made from steel/polyurethane/steel bearing type panels with a thickness of between 40 mm. and feature:

- water hammering resistance
- shock proof characteristics
- resistance to fire and flame (class 1)
- vapour sealing
- protection against magnetic and electrical fields
- sound-proofing
- resistance to corrosion
- resistance to chemical and biological aggression
- heat dispersion coefficient of 0.42 K

## FLOOR

The floor is made from special aluminium strips with a thickness of mm. 40, inserted and electro-welded to the base structure.



## INTERNAL LININGS

The containers used for Lab purposes is internally lined with anti-static PVC suitable for medical use.

All the joints of the PVC on the walls, ceiling and floor are electro-welded to avoid infiltration and to make cleaning and disinfecting as safe and easy as possible as required by current law provisions.



## DOORS

The access door is located in the centre of the end sides. They are built from anticorodal extruded aluminium pipes sealed with closed cell polyurethane and lined with aluminium sheets.





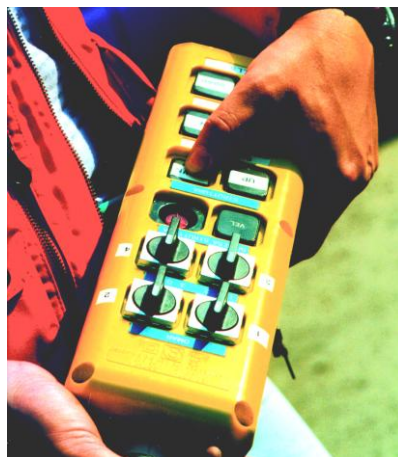
## TENTS CONNECTIONS

The connection between the container and the tent is easily made by PVC tunnel with a fast lock system which guarantee weather condition proof



## HYDRAULIC SYSTEM

The extension of the hydraulic jacks are performed by a **single operator** using a push button panel.



The system comprises an electro-hydraulic control panel supplied by 24 Volt batteries in DC or alternatively at 220V 50 Hz.

The hydraulic system with stainless steel pipes has sequential valves, flow dividers and hydro-piloted valves.

The container is lifted by 4 hydraulic jacks arranged in special housing at the end of the container, these make it possible for a single operator to load and unload the vehicles without needing external equipment such as cranes, bridge cranes, lift trucks etc..

The operator uses the push button panel to operate the single hydraulic jacks, to move them together, two at a time or individually, allowing for loading and unloading operations of the vehicles and levelling of the container in any morphology of terrain



## MOVEMENT SYSTEM

The strong structure of our containers allows to move them in different way such as. Cranes, truck with hook system, Fork lift with spreader , at the CH 47 hook and inside the airplane C 130 or similar.







## ELECTRICAL SYSTEM

The electrical circuit complies with EEC standards and current law provisions. The electrical circuit is installed in special raceways fitted inside the containers.



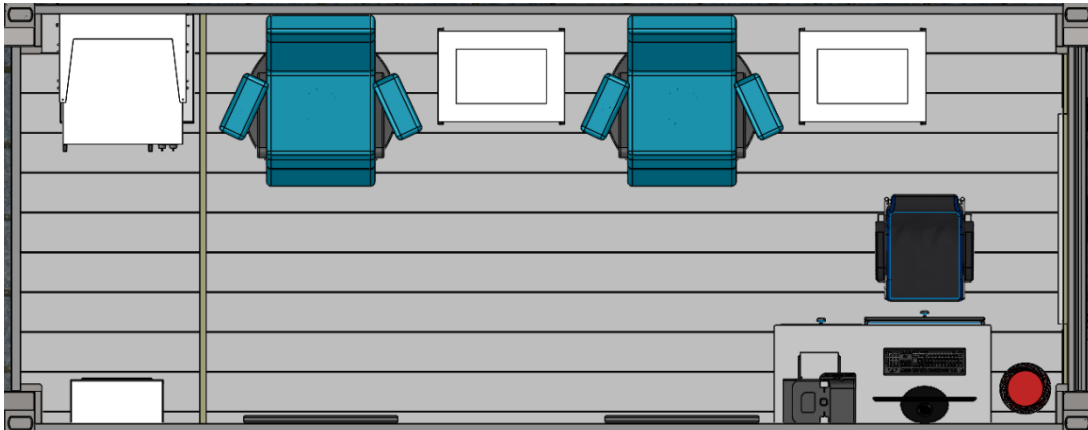
## AIR-CONDITIONING

Unless expressly requested otherwise, the containers are conditioned using single-block. The conditioners are suitably resistant to heating systems.

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## INTERNAL CONFIGURATION



The shelter is divided in two parts:

Technical part

Operative part

### TECHNICAL PART

The technical part is positioned in the back of the shelter. It has dimension about mm 2200x800x 2200h.

In this space are positioned all the accessory necessary to the autonomy of the shelter as:

- Hydraulic system to power the loading jacks with battery pack
- Generating set
- Air conditioning
- Water treatment for dialysis equipment.

### OPERATIVE PART

This part has dimension about 2200x5000x2200h

In this space you find the nurse station with desk and chair and cupboard

N° 2 Haemodialysis chairs

N° 2 Haemodialysis system

N° 2 entertainment system



## **EQUIPMENT CHARACTERISTIC**

### **Reverse osmosis system**

The system has been designed for the production of high purified water, free of chemicals and bacteria, by means of one phase reverse osmosis, for supply until 280 litres/h.

The water circuits are separated from the electrical ones.

- max pressure 16 bar
- salt water in the primary circuit 1000 ppm
- 1 aromatic polyamide membrane

### **Haemodialysis system**

Single patient hemodialysis delivery system providing dialysate at the prescribed temperature and ionic concentration to be used in hemodialysis.

Continuous monitoring of machine, dialysate and blood circuit functions during dialysis.

Preparation and control of ultrafiltration

Possibility to deliver dialysis with acetate module or bicarbonate module.

Technical data:

- dialysate flow rate 300/500/800 ml/min.
- dialysate temperature range:  $\pm 1.5^{\circ}\text{C}$  from nup point

Dimensions: 34x50x133 (h) cm

### **Haemodialysis chair**

An arm support is provided for the patient in every sitting position. This is made possible on the one hand by the individually tiltable and height adjustable armrests (5 cm thick) made of soft integral foam with arm cradles. And on the other hand, by the simultaneous movement of the arm rests together with the adjustment of the couch

- Individually tiltable and height adjustable armrests (5 cm thick), made of soft integral foam with arm cradles, provide the patient with a fatigue-free arm support
- Stepless electric motor powered height adjustment
- Separate electric motor powered adjustment for back and leg support allow stepless, individual settings from sitting, through lying and flat positions, to the bed position.
- An electric motor powered height adjustment of the entire lying surface provides a fatigue-free treatment of the patient in every position (22cm elevation)

-Laying surface width	55 cm - 60 cm
-Laying length	188 cm - 213 cm
-Total length (with extended footstep)	205 cm - 220 cm
-Sitting - laying height TOP X 330	54 - 74 cm
-Sitting - laying height TOP X 220	56 cm
-Weight	80 kg
-4 castors with locking brake	Ø = 7,5 cm
-Transformer protection class	II
-Mains cable rolled	2 m
-Mains cable stretched	3,5 m
-Protection class	II
-Maximum load	175 kg
-Back section tilting angle	up to $75^{\circ}$
-Foot section tilting angle	up to $35^{\circ}$