


VENITALY

MOBILE*MEDICAL* SYSTEM

Mobile Medical Systems




INTRODUCTION

Scores of new patients develop kidney failure every year and require dialysis. What does their future hold? Which health and social services offer them a system that guarantees their survival with a satisfactory lifestyle and a decent quality of life in the future?

When a person becomes ill, their primary requirement is to receive care and have facilities, health workers, and diagnostic and therapeutic means at their disposal. When the illness is chronic and completely conditions the life of both the patient and their family, as in the case of dialysis patients, the need arises for comprehensive health and social assistance that provides access to healthcare facilities, prevents the onset of complications and new pathologies, facilitates the possibility of receiving therapy while continuing to work, prevents alienation, and supports the patient and family members as they adapt to the new way of life.

The fundamental aspect of the experience of haemodialysis is the fact that the patient is dependent on the machine for haemodialysis. This element is the same for all the experiences of people on haemodialysis; to continue living they need to travel to a dialysis unit to have their blood cleaned at least three times a week and they have to adapt their lifestyles to the schedule imposed by the treatment and its limitations. On a personal level, they live a life which is paradoxical in many respects as they are forced to accept a state of dependence that is very limiting in order to maintain their independence for as long as possible. The reality of life for dialysis patients continually alternates between two contrasting situations: they are “well” given that they are not in hospital but they nevertheless have to assume the “role of a patient” on alternate days with all the consequences that this entails.

There are many dialysis units throughout the country and this gives dialysis patients the opportunity to be relatively free to travel and move around. The greatest limit experienced by dialysis patients is that they always need to make sure that there is a hospital or clinic with a haemodialysis unit and contact the unit in advance to check that appointments are available.




INTRODUCTION

Everyone has a right to health. Every country aims to provide satisfactory standards of healthcare and assistance for its people.

The Venitaly Group Mobile Medical Systems are vehicles or prefabricated solutions with a range of **advantages** that make them ideal for many different situations and purposes:

- They are immediately operational and ready for use,
- They can go wherever they are needed to offer access to healthcare services even in remote areas or temporary locations,
- These temporary structures are designed by professionals and equipped with the most advanced technologies to ensure that doctors and staff have the best facilities to offer quality services,
- These temporary structures are designed to guarantee maximum comfort for patients during their visit.

They can be used for **a wide range of purposes**:

- Prevention and care in extreme situations, such as natural disasters, war, etc.,
- Support for healthcare centres undergoing major renovation work or a temporary increase in demand for services,
- Accident and emergency services for touring sports events,
- Healthcare assistance for tourist resorts that only require services at certain times of the year.




OUR IDEA

Taking healthcare services to those who need them.

With years of professional and specialist experience in designing high-quality, mobile facilities with welcoming, light spaces and meticulous attention to detail, we decided to use these systems to provide **Mobile Dialysis Centre with the ideal healthcare service solutions wherever they are needed.**

We offer two different solutions

- The **MOBILE MotorHome® Medical System** essentially provides a temporary service **on wheels.**
A specially-designed technological environment:
- that can be moved wherever necessary and be immediately operational,
- that can support or replace existing permanent healthcare facilities,
- that can be adapted for extreme situations.

- The **MOBILE Container Medical System** enables you to provide a **permanent** service.
A modular space with units:
- that can be rapidly installed,
- that can offer spacious and practical conditions,
- that can be rapidly disassembled, moved and expanded.




MOBILE CLINICS CONSTRUCTION AND MAINTENANCE WORLDWIDE

Venitaly PROJECTS in the health sector

MOBILE MotorHome®
Medical System




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MOBILE Container® Medical System

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PROJECT

Mobile Dialysis Centre

The system is based on one **Operational Unit made up of 14** independent and interconnected **modules** which are transported by semi-trailer trucks.
An outsourced crane is used to install the system in position once the ground has been levelled.

The system will be structured as follows:
1 area set up for dialysis (designed to accommodate 6 beds - beds and dialysers not included).
3 toilet facilities (WC for men-women-disabled).
2 changing rooms (men-women).
1 toilet facility (WC for medical staff).
1 refreshment area/tearoom.
1 waiting room.
1 consulting room.
1 UTILITIES unit: water treatment area, instrumentation and switchboard.
1 storeroom with back-up, a maintenance station and spare dialysers.

All the modules will be interconnected and receive power and other supplies from the UTILITIES unit which is turn is connected to the **local supply lines (water, medical gas, electricity) provided by the client in accordance with our instructions**.




PROJECT

Mobile Dialysis Centre

Module Features

MODULE STRUCTURE
The base structure will be made from steel tubular profiles. Corner blocks will be positioned in the four lower and rear vertices with a standard 20" wheelbase to guarantee **absolute solidity**. Our **special modules** are specifically designed to fulfil their intended use. The materials used are robust and of a high quality so that the modules can **be repeatedly disassembled and moved as they absorb the torsional stress to which they are subjected without being damaged**.

ROOF
Completely insulated self-supporting single plate.

SIDES AND HEAD PLATES
Covered with classification BS2D0 polyisocyanurate composite panels.
Total thickness of the structure 100 mm.
Panels receive rustproof and epoxy treatments before assembly.
Nonslip vinyl flooring made from "Easy Clean" sheets. The mixture used in the product contains a permanent bactericide which guarantees a hygienic environment with a low emission of organic toxic substances (T.V.O.C.) in accordance with EN 15052.

All entrance and transit areas will be lit to ensure patients can visit even when outside lighting conditions are poor. Pneumatic/ magnetic seals will be provided in the interconnecting areas between the access points of the different modules to prevent any water seepage during bad weather.

PAINTWORK
The base structure will be treated with rustproofing before the panels are installed.
Undercoat with bituminous products and plastic sealants to protect contact and welding areas.
Pastel white paintwork with a diversified cycle in accordance with the material beneath.




PROJECT

Mobile Dialysis Centre

Dialysis Area Features
The dialysis system will be run by the UTILITIES unit with plumbing and electricity interconnections. Every dialysis station will have: a ceiling mounted LCD television, wireless headphones with independent channel and volume control. Independent adjustable lighting. Courtesy light.

Air-conditioning System
The system is based on equipment with inverter technology and comprises independent units situated in the different modules. The system will maintain the same level of air-conditioning (cold- hot) throughout the unit including the entrance and the bathrooms.

Sound/Video/Wi-Fi System
Installation of a self-seeking satellite dish with internal points in the dialysis area. Installation of LCD televisions and DVD players with the option of programme selection. Wi-Fi internet connection.

Fixtures and Fittings
Venitaly chooses only the best to ensure **maximum quality and comfort**.
The toilet facilities have fixtures and fittings made by **FRANKE**, an Italian company which is the global leading manufacturer of stainless steel hospital sanitaryware.

All medical equipment is made by **Fresenius Medical Care**, the largest dialysis equipment and services provider in the world.




PROJECT

Mobile Dialysis Centre

The structure will be supplied tested and ready for use.
It will be supplied with:
A Use and Maintenance Manual.
Synoptic diagrams for the systems.
Certifications for the systems.

Venitaly Group can also provide support and assistance for the staff managing the centre. We put our **know-how** at your disposal to help organise **training courses** and the **direct maintenance** of all the equipment.

The **Dialysis** centre involves the use of specific **equipment**, such as:

- **Reverse osmosis system - AquaB DUO**
A double pass reverse osmosis system designed for the economical and environmentally-compatible production of permeate for dialysis. The pressure pumps, membrane modules and the apposite monitoring system are used to produce permeate for dialysis from pre-treated drinking water.
In accordance with the requirements of the "Haemodialysis solutions, concentrated, water for diluting" monograph from the European Pharmacopoeia 6th Edition, only permeate may be used to dilute concentrated solutions for haemodialysis.
The system has state-of-the-art technology. It is equipped with all the safety systems required to perform its functions and ensure the safety of the patient. It complies with the requirements laid down by the EN 60601-1(IEC 601) standard. The system is classified as CLASS IIb (MDD).




PROJECT

Mobile Dialysis Centre

- Ion exchange water softeners

These water softener units are designed to eliminate all components from the water that increase its hardness. They function based on the principle of ion exchange between Ca2+ and Mg2+ ions and Na+ ions.
These are a valid tool for pre-treating the water used to supply reverse osmosis desalination systems.

Each water softener has:

- Food-grade cation-exchange resins. The particle size is rigorously selected, controlled and uniform and offer high performance.
- Non-toxic plastic multiphase control valve with a 24 V timer.
- Tank with a fibreglass exterior and a certified non-toxic PVC interior.
- Sample valve.
- Brine tank capable of at least 10 regenerations.

Every component that comes into contact with water that has or will be treated is stringently constructed using certified non-toxic materials.
The hardness of the water is an important parameter for quality: if the water entering the reverse osmosis systems is “soft”, this ensures optimal operational conditions for the osmotic membranes which means better quality results and a longer product life for the membranes.




PROJECT

Mobile Dialysis Centre

- Conductivity monitor
The conductivity monitor is installed the dialysis area or in another supervised area. The monitor has a digital conductivity meter which enables the conductivity of the water in the circuit supplying the dialysers to be continuously read.

- Dosing pumps

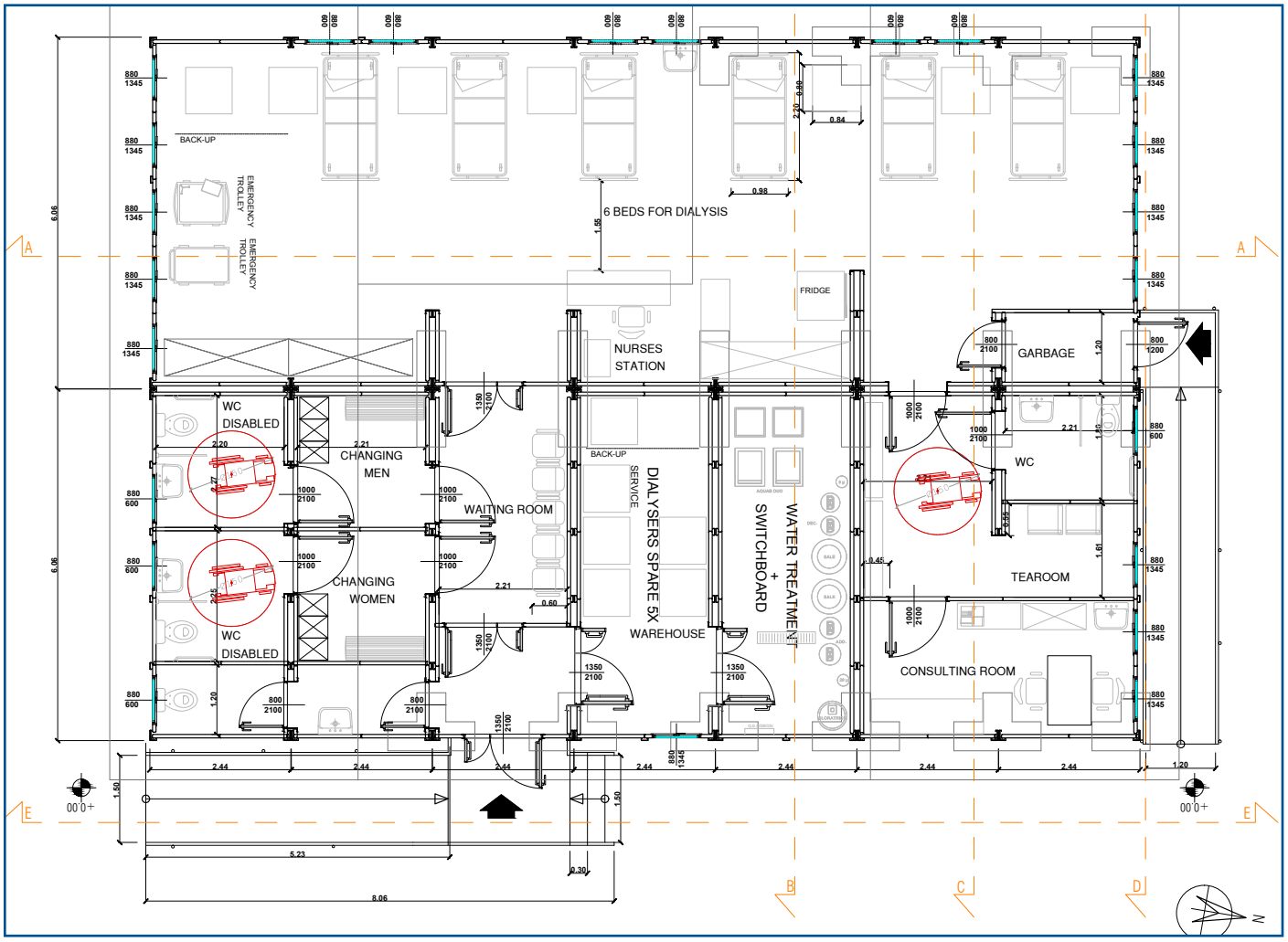
- Cartridge filters
The cartridges perform the filtration and utilize the capacity of the filtering medium (pure polypropylene staple fibres) to remove specific physical and chemical impurities from the water. The cartridge filters are specifically designed to remove physical particles in a filtration range from 50 microns (gross filtration) to 1 micron (microfiltration).
These are therefore chosen according to the point of the treatment in which they are used and the function which they need to perform. Another important category of filters is activated carbon cartridges, which are used to safely dechlorinate the water.

- Dechlorinating filters
These products are dechlorination units designed to remove free chlorine (CL2) and all chlorine compounds in general from the water. The dechlorinating filters are based on the principle of filtering by means of activated carbon, and capture molecules of free chlorine and any other compounds that may be present.
A dechlorination system is needed when membranes are used for reverse osmosis of the water in order to prevent contact with chlorine or chlorine compounds causing any damage to the membranes.
This phase of the treatment is particularly important because the absorbent action of the activated carbon is particularly effective towards the toxic compounds which are increasingly more commonly found in mains water, i.e. pesticides, disinfectants and organic pollutants.




PROJECT

Mobile Dialysis Centre
LAYOUT






PROJECT

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