MOBILE HOSPITALS FOR MILITARY AND CIVIL USE
MOBILE HOSPITAL

Consists of
• Semi-trailers with sliding walls,
• Special tunnels adjusting modules

We offer a wide range of Mobile and Relocatable Military Solutions for
- diagnostics,
- field hospitals,
- and many other purposes.

Mobile Clinic Equipment is certified by Philips, Siemens and GE.

The layout of each unit is designed to create an optimal environment for both patient and operator.

The practical result is an efficient working environment that enables the user to treat a maximum daily number of patients.

Mobile hospital advantages
• Terms of commissioning
• Speed of relocation
• Occupied area
• Number of operating personnel

• Multi-purpose solution
• Any configurations of modules
• Independence
• High capacity

Joint use of several mobile units allows hospitals and military bases to keep total control over patients and ensures high level of the provided services due to the use of new technologies.
MOBILE MEDICAL UNITS CONSTITUTE A MOBILE HOSPITAL

1.1 Mobile operating theater (neurosurgery)
1.2 Mobile operating theater (general surgery)
1.3 Mobile operating theater (traumatology)
2. Mobile intensive care (4 beds)
3. Mobile MRI, 1.5 T
4. Mobile X-Ray and ultra sound equipment
5.1 Mobile surgical dressing room (clean)
5.2 Mobile surgical dressing room (purulent)
6. Mobile CT, 16 slices
7. Sterilization room
8. Mobile pharmacy, drugs store, medical gas storage
9. Morgue
10. Mobile unit for staff accommodation (mini-catering, showers, lavatories)
11. Mobile unit for staff accommodation (8 beds)
12.1 Technical mobile unit with generators
12.2 Mobile unit with fuel
13. Mobile unit for water purification
14.1 Mobile catering
14.2 Mobile canteen
15. Mobile refrigerator for food products storage
16. Mobile unit (lavatories, showers)
17. Reception mobile unit, patients waiting area
18. Mobile unit– connecting passage

Hospital area is ~0,4 Ha (4 000 m²)
DELIVERY OF HEALTH CARE DURING MILITARY OPERATIONS

Fully-equipped hospital mounted onto semi-trailers being located far from warfare and performing all kinds of operations.

Gathering and delivery of the wounded is performed also by special medical armored vehicles and trucks with high capacity of loading.

1st echelon consists of:
- Medical air posts arranged by medical platoons of the operational squadrons,
- Medevac points arranged by medical squadrons of brigade support battalions.

Basic goals
- Discover,
- Data collecting and data sorting,
- Medical first aid,
- Prepare for further evacuation.

II echelon

2nd echelon consists of:
- Medical corps of the division

Basic goals
- Evacuation of the wounded, injured and invalid from medical service points of divisions
- Providing them with competent medical service at the evacuation points of division
- Preparing them for evacuation to the corps rear area.

MEDEVAC

III echelon

3rd echelon consists of:
- Mobile hospitals, arranged by medical brigade of army corps

Basic goals
- Evacuation from evacuation points of the 2nd echelons
- Specialized medical service within up to 15 days in clinic
- Medical treatment of the wounded and the diseased, who can be returned back to the ranks after short-term treatment
- Preparing for further evacuation.

IV echelon

4th echelon consists of:
- forces and facilities of medical service in communications zone

Basic goals
- Evacuation of the wounded, diseased and injured from mobile hospitals, their allocation in army corps rear areas
- Competent treatment within up to 30-60 days in multifunctional stationary hospitals
- Preparing for transfer to the rear area
- Medical service basing upon territorial principle within area of communications

Increase of evacuation vehicles capacity, use of armored vehicles for evacuation.

Specialized medical aid to the wounded in a hospital within up to 15 days. 80% of all the wounded come through the 3rd echelon

Specialized medical aid to the wounded in a hospital within up to 30 days.
VEHICLE FOR TRANSPORTATION OF THE WOUNDED (INTENSIVE CARE) AND MEDICAL FIRST AID

1. Nurses station
2. Area for the wounded (12 beds)

MEDICAL CONTRAINDICATIONS IMPEDING EVACUATION OF THE WOUNDED AND DISEASED FROM THE 3RD ECHELON TO THE 4TH one

1. severe shock of the systolic (upper) blood pressure lower than 90 Mmhg
2. severe traumatic brain injury, cerebral stroke with further loss of consciousness close to or equal to coma
3. multiple full-thickness burn
4. massive blood loss
5. multiple complex injuries making vital organs disable
6. severe unsolved surgical pathology
7. convulsive disorder
8. significant respiratory failure
9. agonal state or clinical death
10. acute myocardial infarction with a significant pain syndrome and heart failure
11. hypertensive crisis with arterial blood pressure higher than 230 Mmhg
12. other comas
13. severe acute bronchial asthma (status asthmaticus)
14. eclampsia – emergency condition in pregnancy
15. mental disorder with significant jitteriness
16. extreme emaciation (cachexy)
USE IN WAR TIME by the example of NATO

In the development of general plans for medical support of troops (forces) NATO command comes from the calculation of the total number of combat deaths in the fighting:

- **10%** missing,
- **20%** dead,
- **70%** (sanitary losses, requiring medical care and treatment) of all the losses.

According to the current forecast, **30% of the injured** will be able to rejoin the forces in **30 days**.

**INJURED and AFFECTED by WMD (Weapons of Mass Destruction)**

- **70%** level (volume) groups of necessity in terms of medical assistance need and the chances of survival (in the armed forces of most NATO countries)

- **40%** Injured and affected by WMD, who can be treated by provision of minimum medical aid in mobile hospitals, followed by a return to the front line. This group can be up to **40%** of the total number of wounded and affected.

- **20%** Injured and affected by WMD, whose surgery can be postponed in case the mobile hospitals are full of group 1 and 2. This group can be up to **20%** of the total number of wounded and affected.

- **20%** Injured and affected by WMD, who require emergency medical care in mobile hospitals (up to 15 days stay in hospital). This group can be up to **20%** of the total number of wounded and affected.

- **20%** Injured and affected by WMD, who require long and sophisticated treatment (30-60 days), these are sent to stationary hospitals. This group can be up to **20%** of the total number of wounded and affected.

**ALMOST 80% OF ALL THE INJURED WILL GO THROUGH THE MOBILE HOSPITAL**
MEASURES TO IMPROVE MEDICAL SERVICE FOR ALLIED FORCE TROOPS*

1 Enhancement of first aid means

To evacuate wounded from a battlefield ambulance armored personnel carriers were implemented in most NATO countries along with all-terrain ambulance cars.

2 Increase evacuation means capacity in all medical echelons.

3 Increasing technical equipment of field medical facilities

In most Alliance countries the automated system of accounting and distribution of medical supplies is implemented. Medical supplies are calculated at average for 30 days of combat actions.

4 Increase of medical units mobility

Battalion medical aid stations are equipped with mobile dressing rooms mounted on armored personnel carriers.

Well-equipped mobile surgical hospitals with 60 beds each and sanitary trains (each train has 18-26 trailers with capacity of 40-60 beds) are in use in number of countries.

*Mobility degree

Mobility degree of Medical units

Mobility degree of Combat units

*by the example of NATO
MOBILE MEDICAL UNITS in semitrailers with a variable geometry body frame
USED IN PEACE- AND WARTIME

Mobile unit with x-ray operating room mounted on semitrailer

Work starts in 10-20 minutes after arrival to deployment site
MOBILE MEDICAL UNITS
in semitrailers with a variable geometry body frame
USED IN PEACE- AND WARTIME

Using several mobile units that can be connected to each other we can create a mobile center of complex treatment.

In this mobile hospital a wide range of examinations and procedures can be performed: starting from general examination in examination room and to complex surgical interventions in operating room.

PERFECT SOLUTION DESIGNED FOR MILITARY USE.

Work starts in 10-20 minutes after arriving on deployment site.
### LARGE HOSPITAL
comprising several mobile medical units
in semitrailers with a variable geometry body frame

<table>
<thead>
<tr>
<th>№</th>
<th>Unit name</th>
<th>Q-ty, pcs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobile operating room</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1.1 general surgery</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1.2 neurosurgery</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1.3 trauma</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Mobile intensive care unit (for 4 beds)</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Mobile 1.5 Tesla MRI unit</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Mobile unit of x-ray and ultrasound diagnostics</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Mobile dressing room:</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>5.1 clean</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5.2 purulent</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Mobile unit of 16 slices CT</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Mobile sterilization room</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Mobile pharmacy, medication storage, medical gases</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Morgue</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Mobile unit of staff rest room</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Mobile unit of staff accommodation (8 beds)</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Technical mobile units:</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>12.1 generators</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Mobile unit of water purification</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Mobile units:</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>14.1 catering</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>14.2 canteen</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>Mobile unit (lavatories, shower)</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>Reception mobile unit</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL:</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

We are open for discussion of mobile units cost with your specialists.
Mobile hospital operation is defined by highest possible rate of equipment use. Mobile diagnostic unit is the fastest solution for medical imaging on sight. Our mobile equipment can work independently and ensure the highest level of medical care where it is required. All mobile solutions are certified for all range of diagnostic services

- MRI,
- CT,
- PET/CT,
- x-ray laboratory,
- intensive care unit,
- diagnostic laboratory
- cardiovascular system.

We are open for discussion of mobile units cost with your specialists.
1. Hydro elevator for disabled people (serves as a passage from one unit to other)
2. Vestibule
3. Medical gas storage room
4. Pre-operating /post-operating room
5. Operating room
6. Doctor’s changing area
7. Sanitary inspection room
8. Service compartment (generator, air conditioning equipment)
MOBILE OPERATING ROOM
in semitrailer with a variable geometry body frame
2. MOBILE INTENSIVE CARE UNIT
in semitrailer with a variable geometry body frame

1. Hydro elevator for disabled people (serves as a passage from one unit to other)
2. Vestibule
3. Medical gas storage room
4. Intensive care unit (4 beds)
5. Nursing unit
6. Lavatory
7. Service compartment (generator, air conditioning equipment)
3. MOBILE MRI UNIT 1.5T
in semitrailer

1. MRI 1.5 T examination room
2. Control room
3. Technical room
4. Service compartment (generator, air conditioning equipment)
5. Hydraulic elevator for disabled people (serves as a passage from one unit to another)
1. Hydraulic elevator for disabled people (serves as a passage from one unit to other)
2. Vestibule
3. Patients’ waiting area
4. Changing room of staff
5. X-ray diagnostics room (x-ray unit for 2 work places)
6. Doctors’ automated work place for 2 places
7. Ultrasound investigation room
8. Corridor/ patients waiting area
9. Service compartment (generator, air conditioning equipment)
5.1 and 5.2 MOBILE DRESSING ROOM
in semitrailer with a variable geometry body frame

1. Hydro elevator for disabled people (serves as a passage from one unit to other)
2. Vestibule
3. Pre-dressing room
4. Corridor
5. Dressing room
6. Service compartment (generator, air conditioning equipment)
1. 16 slices CT examination room
2. Control room
3. Technical room
4. Service compartment (generator, air conditioning equipment)
5. Area of patient cloths changing
6. Hydro elevator for disabled people (serves as a passage from one unit to another)
9. SPECIAL REFRIGERATOR – HUMAN REMAINS
in semitrailer with a variable geometry body frame

1. Entrance
2-3. Workspace
4. 64 places repository
5. Cold generating equipment
10. and 11. MOBILE UNITS for RESTING and STAFF ACCOMMODATION

**MOBILE UNIT OF REST AREA**
1. Staff rest area (mini-kitchen, refrigerator, tables, sofas, TV)
2. Vestibule (closets for outer garments (2 pcs.)
3. Lavatory/shower room (shower cabin, washing machine)
4. Lavatory/shower room
5. Corridor

**MOBILE UNIT OF STAFF ACCOMMODATION**
6. Lavatory
7. Bedroom for 8 beds (2-tier bed, wardrobe, bedside table)
8. Corridor
9. Service compartment (generator, air conditioning equipment)
Mobile units of water purification are designed to purify natural water from surface or underground water reservoir of natural and anthropogenic pollution and bringing it up to “drinking water” quality. These units are designed for using in areas without utilities systems.
Mobile module was created for medical care delivery to people living in remote areas. Module is able to overcome heavy dirt roads, fords and mountain trails. This technology is based on a special all-wheel drive chassis with unique subframe design which allows car to cross difficult terrain without damaging valuable equipment on board.

Inner module configuration includes:

- Laboratory with pharmacy
- Gynecologist office
- Room for ultrasound investigation and vital signs control.
- Independent generator
- Upgraded air conditioning system

Mobile medical modules are able to
- Independently operate in every region of the world,
- wharf at stationary medical center for providing of medical aid to population.
Mobile hospital PET/CT or PET/MRI with relocatable CYCLOTRON module in semitrailer
(on site radiopharmaceutical receipt for PET/CT examination)