HOSPITAL CONTAINER

FIELD HOSPITAL MODULE

Technical Specifications &QUOTATION

06.11.2025

ISO 13485 ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

FIELD HOSPITAL MODULE

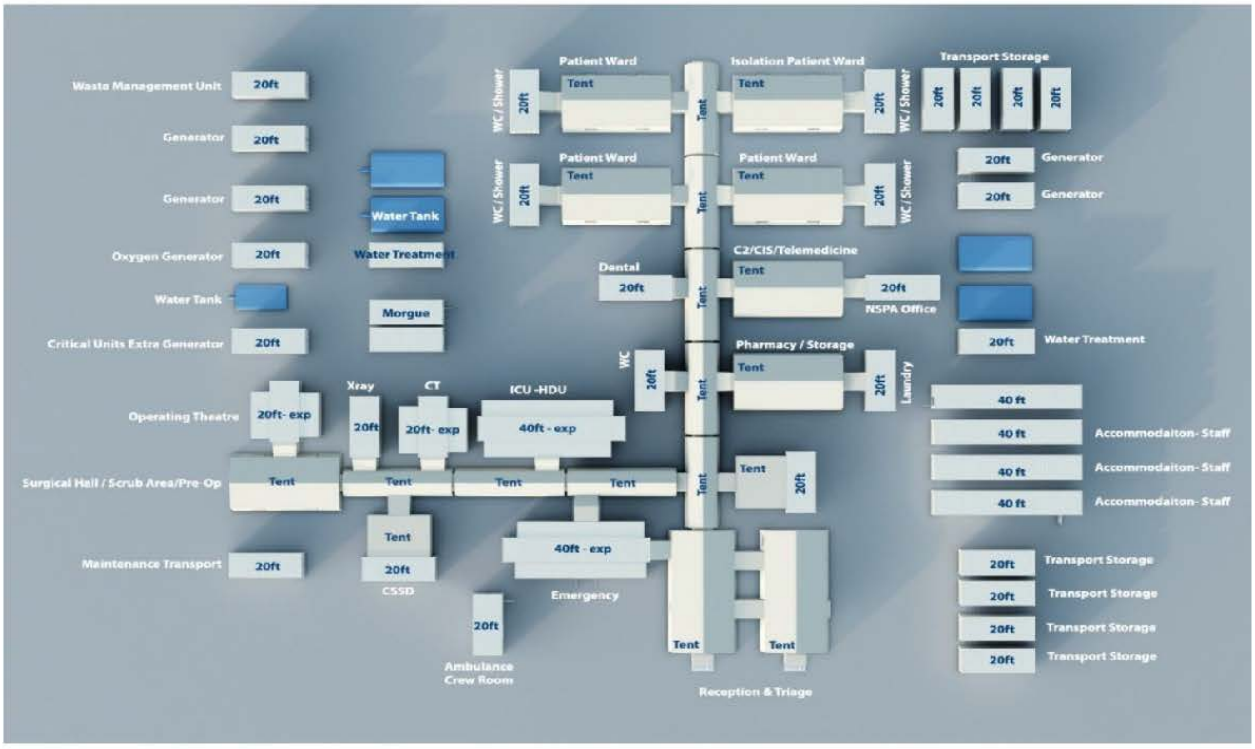
ANNEX A – MODULE SUMMARY TABLE

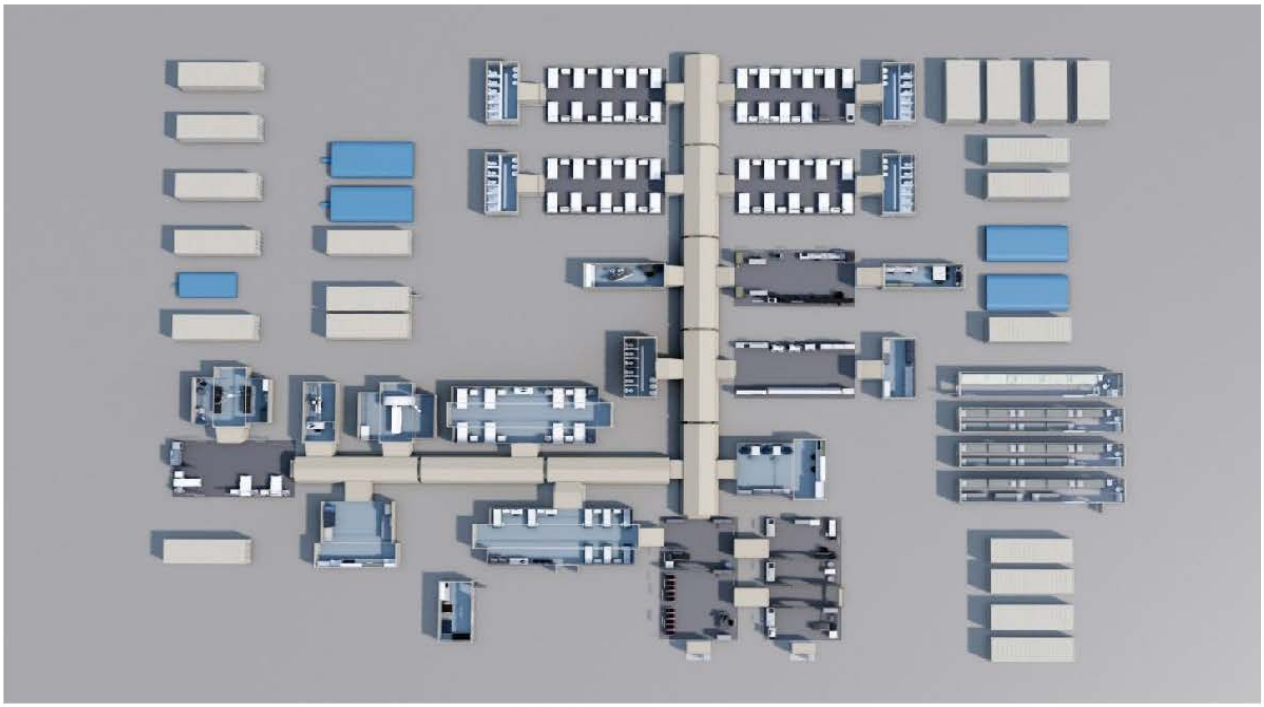
The following table summarizes all modules and functional units of the our Deployable Field Hospital, including their container type and operational function.

Module / Unit	Description / Function
Reception & Triage Tent	Initial patient intake, registration, and prioritization area.
Corridors	Connects all functional units ensuring smooth patient and staff flow.
Operating Theatre – Caesarean & Minor Surgery	Fully equipped surgical room for minor and cesarean operations.
Laboratory	For clinical analysis, sample preparation, and medical testing.
ICU and HDU Unit	Intensive care and inpatient monitoring unit with advanced life support systems.
Pharmacy and Warehouse	Storage and distribution of medical supplies and drugs.
Waste Management Unit	Handles hospital solid and hazardous waste according to NATO environmental policies
Toilet Shower Unit	Sanitary unit providing toilets, showers.
X-Ray	Medical imaging unit for diagnostic radiology.
CT Unit	Advanced computed tomography imaging unit for diagnostic purposes.
CSSD – Central Sterile Supply Department	Sterilization and preparation area for surgical instruments.
Operating Theatre Support / Pre-Op Area	Preparation and scrub area for surgical operations.
Emergency Room	Reception and stabilization area for emergency patients.

Ambulance Crew Room	Rest and coordination area for ambulance teams.
Maintenance Transport	Storage and tools for technical maintenance and repairs.
Critical Units Extra Generator	Backup generator dedicated to critical care modules.
Generator Units	Primary power generation modules supplying all systems.
Oxygen Generator	Production and supply of medical-grade oxygen for hospital use.
Water Tanks	Storage of potable and process water for hospital operations.
Water Treatment Units	Purification and treatment of raw water sources for hospital use.
Morgue	Facility for temporary preservation and management of deceased patients.
Isolation Patient Ward	Dedicated isolated area for infectious or quarantined patients.
Patient Ward	General patient accommodation area with 28-bed capacity distributed among wards.
C2/CIS – Telemedicine Unit	Command, control, and telemedicine communication center.
NSPA Office	Administrative and liaison office for NATO and support personnel.
Pharmacy / Storage Tent	Additional space for medical consumables and logistics.
Laundry	Automated laundry system for staff uniforms and patient linens.
Accommodation – Staff (x4)	Living quarters for hospital staff with climate control and sanitation.
Transport Storage (x8)	Storage units for transport crates, supplies, and logistics equipment.

NATO ROLE 2 TOP VIEW





TECHNICAL SPECIFICATION FOR MODULAR FIELD HOSPITAL

1. GENERAL DESCRIPTION

This specification defines the technical requirements for a modular, portable, fully equipped maternity and general healthcare field hospital. The system shall be designed for rapid deployment and operation in field conditions between -20°C and +50°C, in humid and dusty environments. All containers shall comply with ISO 668 standards.

2. STRUCTURE AND MATERIALS

- Exterior paint: UV-resistant, electrostatic powder coating.
- Floor: Non-slip, antibacterial 5mm PVC covering.
- Windows: Double-glazed PVC
- Doors: Fire-resistant steel with weatherproof insulation.
- Operation room door will be operated by a motion sensor
- All doors will have locking mechanism for security.

3. INTERCONNECTION SYSTEM (ACCORDION TYPE)

- Container interconnections will be sealed with dustproof and waterproof accordion-type tents.
- Minimum width: 160 cm; height: 230 cm; maximum extension: 5 m.
- Material: UV-resistant, waterproof, flame-retardant fabric.
- A flysheet tent shall be added by tensioning method to protect against sun and rain.
- Floor level differences shall be minimized; ramps for stretchers shall not exceed a 15° slope.

4. EXPANDABLE CONTAINER FEATURES

The expandable containers shall be designed and manufactured to ensure full structural integrity, user safety, and compliance with medical facility standards. The following technical specifications shall apply:

Roof Structure

• The roof of the expandable sections shall be sloped to prevent accumulation of rainwater and snow.

Sealing and Insulation

• All connection and opening points will be properly sealed with suitable gaskets and insulation materials to prevent ingress or egress of air, water, or dust.
• All system will be dustproof and waterproof

Locking and Safety Mechanisms

• Each wall will be equipped with locking mechanisms to ensure stability after expansion.
• Easy mounted piston systems will be used to assist operator of effort.

Fixing instructions will be provided for each stage of the opening process to ensure safety during setup and operation.

Flooring

• At floor-to-wall junctions, the PVC flooring shall extend at least 5 mm vertically (as a skirting).
• Reinforcement materials may be used beneath the flooring to reduce deformation in folding areas.
• After full expansion, the floor level difference shall not exceed 3 mm across the entire area.

Medical Area Requirements

• The floors of Operating Theater, Intensive Care, and Semi-Sterile Zone containers will be comply with cleanliness standards.
• The Operating Theater and Intensive Care expandable containers will provide an internal usable area of at least 39 m^2 when fully deployed.

Semi-Sterile Area (Preparation Zone)

• Each expandable wall will include doors for interconnection with adjacent units.
• Sterile area will include a double surgical handwashing unit inside.
• The expansion system may use sliding room structures, telescopic partitions, as long as full sealing and alignment are ensured.

5. HVAC SYSTEM

• Each container will have an independent AC system.
• Digital control panel will display and adjust temperature.
• For general containers, outdoor AC units will be mounted on sliding rails at the rear; extendable during use and retractable during transport.
• Operating theater and ICU containers will be equipped with HVAC units providing heating, cooling, and humidity control, with unidirectional downward airflow and at least H13 class HEPA filters.
• The system will not restrict the movement of ceiling-mounted surgical lamps.

6. ELECTRICAL AND ELECTRONIC SYSTEMS

• All technical panels will have a minimum protection rating of IP65.
• Each medical container will have an independent grounding system.
• Power input panels will include standard connectors, mounted downward to prevent water ingress.
• External cables and entry points will be weatherproof.

• Electrical design will be calculated according to device load requirements.
• Power distribution will be through an internal distribution board containing:

- Main circuit breaker
- Automatic phase switch (for 3-phase)
- Residual current device (RCD)
- Surge protector (SPD)
- EMI filter
- UPS/Mains selector
- Circuit breakers for lighting, outlets, HVAC

• Operating theaters and ICUs will be powered through UPS systems.
• Each container will have at least two LAN (CAT6) data connections.
• Cables will be routed inside rigid PVC cable ducts; no exposed wiring allowed.
• Lighting:
- Fixed containers: Min. 4 × 40W LED panels (60×60 cm)
- Expandable containers: Min. 8 × 36W LED panels (30×120 cm)

• Personnel safety shall be ensured through full insulation and grounding.
• Each container will have a separated power distribution panel.
• Electrical infrastructure wil be designed for city electricity,solar panel and diesel generator.

7. LIGHTING REQUIREMENTS

- LED lighting will be used throughout all modules.
- Operating theaters shall provide at least 1000 lux illumination.
- Offices and rest areas: 400 lux; Patient wards: 250 lux.

8. PLUMBING SYSTEM

- All clean and waste water lines will be made of PPRC material.
- Lines will be insulated to prevent freezing in cold environments.
- Leak-proof connections will be pressure tested.
- Bathroom and toilet containers will include:
  -Stainless steel shower bases, urinals, wash basins, WC pans, and toilets.
  -All faucets, hoses, and fittings will be stainless steel
  -Mixing valves and pressure regulators will be included.
  -Hot water will be provided with an instant electrical heater under sink
  .

9. FURNITURE AND EQUIPMENT

• Each container will include furniture suitable for its function (beds, tables, cabinets, shelves, etc.).
• Material:
Body: 18 mm MDF
Drawers: Stainless steel slide rails, soft-close.
• In operating, laboratory, and ICU units, all furniture shall be stainless steel or medical- grade materials.
• Office areas will include ergonomic desks, chairs, and filing cabinets.
• All furniture will be secured for safe transport.

10. WATER STORAGE AND TREATMENT SYSTEM

The field hospital shall be equipped with independent clean water and wastewater storage systems, fully integrated into the facility's plumbing and treatment network.
All tanks will be mounted on reinforced bases, provided with lifting lugs, drain valves,and

maintenance access to ensure safe operation, transport, and servicing.

10.1 Containerized Clean Water Treatment System

(Multimedia Filtration System,

Activated Carbon Filtration System, Water

Softening System, Antiscalant Dosing Unit, 500

L/h Reverse Osmosis System,

Automatic Chlorine Dosing Unit, UV Disinfection System, 2 × 1 m^3 Collapsible

Water Storage Tanks Wastewater Treatment System

(SBR Reactor (Dimensions: 1.75 × 2.5 × 2.5 m) 2 m^3 PE Water Tank)

10.2 Clean Water Bladder

Capacity: 20,000 liters (20 tons)

Construction: Made of PVC-coated fabric (tarpaulin) with the following properties:

- Protection against UV rays
- Protection against microorganisms
- Resistance to cracking at low temperatures

Connection: The clean water tank shall be directly connected to the water treatment and distribution network to ensure continuous potable water supply throughout the field hospital.

- **10.4 Wastewater Bladder**

  Capacity: 5,000 liters (5 tons)

  Construction: Made of PVC-coated tarpaulin with the same protective features as the clean water tank:

  - UV resistance
  - Antimicrobial protection
  - Resistance to low-temperature cracking

  Connection: Wastewater shall be directed to the treatment system (SBR reactor or equivalent) for proper purification and safe discharge.

TENT EXPLANATIONS

Corridor & Hallways
Aluminium Frame Metal Tent Approx 6m x 6m x 3m (Approx 36m2) White Interior Liner Exterior : PVC,Green Colour Fabric min 550 gr/m2 Floor PVC Fabric min 680/gr/m2 Hammer & Stakes Tent Carrying Cover
Surgical Hall / Scrub Area/Pre-Op , Command Control 2, Patient Ward
Aluminium Frame Metal Tent Approx 6m x 9m x3m (Approx 54m2) White Interior Liner Exterior : PVC,Green Colour Fabric min 550 gr/m2 Floor PVC Fabric Grey colour min 650/gr/m2 Hammer & Stakes Tent Carrying Cover
Reception / Triage, Primary Care
Aluminium Frame Metal Tent Approx 6m x 12m x 3m (Approx 70m2) White Interior Liner Exterior : PVC,Green Colour Fabric min 550 gr/m2 Floor PVC Fabric min 680/gr/m2 Hammer & Stakes Tent Carrying Cover
Tent to Tent Connection hall 1 x1 m

11. DOCUMENTATION AND DELIVERY

- As-built electrical drawings will be submitted.
- Functional tests and user training shall be completed prior to delivery.

QUOTATION FOR ROLE 2 FIELD Hospital

Name	Type	QTY
Reception & Triage	Tent	1
Emergency & Resuscitation	Expandable Content	1
CSSD	Expandable Content	1
CT	Expandable Container	1
Surgical Hall / Scrub Area/Pre-Op	Tent	2
Operating Theatre	Expandable Container	2
Intensive Care and HDU Unit	Expandable Content	1
Radiology & X-Ray/Usg	20' Container	1
Laboratory / Clinical Chem. / Haematology / Blood Bank / PCR	Expandable Content	1
Corridor & Hallways For Hospital	Tent	8
Pharmacy / med log	expandable content	1
Laundry (clinical)	20' Container	1
Command Control 2	Tent	1
NSPA Office	20' Container	1
Patient Ward	Tent	3
Patient Ward Isolation	Tent	1
Wc /shower block For	Container	4

Patient Wards		
Wc For Outpatients/ general access	Container	1
Morgue	20' Container	2
Ambulance crew room	20' Container	1
Oxygen Generator Unit	Container	1
Water Tank	Bladder	4
Waste Water Tank	Bladder	5
Water Treatment & Tank	Container	2
Generator	Container	4
Critical Units Extra Generator	Box	1
Waste Management Unit	Container	1
Transport Containers	Container	8
Maintenance Transport	Container	1
Primary Care option	Tent	1
Parts:		
GP / consult room	part of the tent	1
treatment room / nursing station	part of the tent	2
stand alone pharmacy (out patient)	part of the tent	1
Dental Option	20' container	1
Staff Accommodation	40'Container	3
VIP Accommodation	40'Container	1
Tent to Tent Connection		30
Patient Head Beds		28
Intensive Care Beds		8
Examination Couches		6
Patient Bed		20
	TOTAL: 3.950.600 EUR	rooms, furniture and beds no medical equipment

NOTES

*Our prices do not include any taxes or custom charges or transportation charges.
*All prices are factory gate prices /EX Work Turkey
*Delivery time 6 months after confirmation of the order.
*Payment terms: **50%** deposit on definite order/contract signing date, Remaining split in 3 traches.
* Warranty is two years
* An inspection of the factory is allowed after the contract is signed and the deposit is paid