



PORTABLE PRIMARY HEALTH CARE CENTER





Overview of Primary Health Centers (PHCs)

What is a PHC?

A Primary Health Center (PHC) is a basic health unit providing integrated curative, preventive, and promotive services to a rural population. They function as a referral unit for sub-centers and are meant to serve a population of around 30,000 people in plain areas and 20,000 in hilly/tribal areas (as per Indian public health standards).

Types of Equipment in PHCs

PHCs are equipped with basic medical equipment to deliver primary care services. Here are typical categories and examples:

1. General Examination Equipment

- Stethoscope
- Blood pressure apparatus
- Thermometer (digital/mercury)
- Weighing scale (adult/infant)
- Torchlight
- Examination table
- Tongue depressors
- Height measuring scale

2. Diagnostic Equipment

- Hemoglobin meter
- Glucometer
- Microscope (for malaria, TB smears, etc.)
- Urine test kits
- Rapid Diagnostic Test (RDT) kits for malaria, dengue, etc.

3. Emergency and Minor Procedure Equipment

- Autoclave (for sterilization)
- Delivery table
- Suction machine
- Oxygen cylinder with mask
- Nebulizer
- Resuscitation equipment (Ambu bag, airways)
- Minor surgical instruments (forceps, scissors, suture materials)

4. Cold Chain Equipment (for Immunization)

- ILR (Ice Lined Refrigerator)
- Deep freezer
- Vaccine carriers

5. Laboratory Facilities

A standard PHC usually has a basic lab for:

- Hemoglobin testing
- Urine analysis
- Blood glucose
- Malaria and TB smear
- Pregnancy tests



Portable Primary Health Center

Sarvodaya – health for all, right at their doorstep

Primary Health Centers (PHCs) are the cornerstone of rural healthcare in many countries, especially in India. They are the first point of contact between the rural population and the healthcare system.

Core PHC Areas Covered & Strengthened by DHARMA PORTABLE PHC

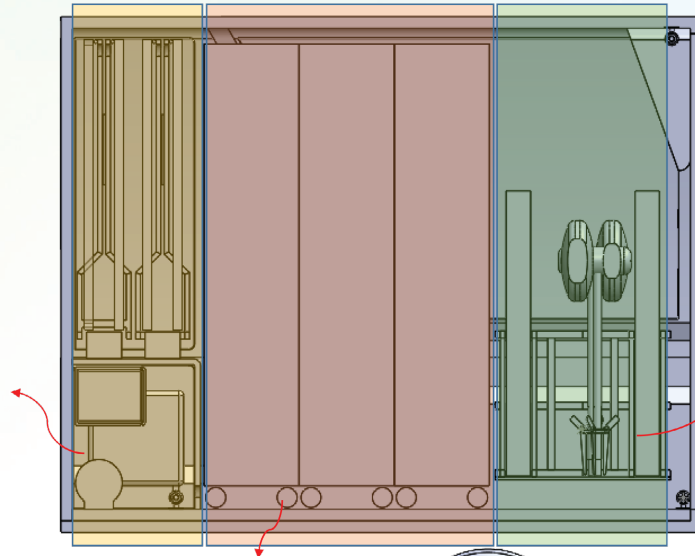
- **Maternal and Child Health (MCH) services** – antenatal and postnatal care, safe childbirth, newborn care, family planning, and immunizations.
- **Infectious Disease Control** – vaccination against common diseases, early treatment of fevers and infections (malaria, diarrheal disease, tuberculosis, etc.), and management of locally endemic illnesses.
- **Common Ailments & Minor Injuries** – appropriate treatment for routine illnesses (cough, fever, pain) and first aid for injuries. Basic procedures like wound suturing, abscess drainage, or stabilizing fractures are expected when possible.
- **Emergencies and Stabilization** – initial management of emergencies (snakebites, trauma, obstetric complications, etc.) to stabilize patients before referral. PHCs are meant to provide **first-contact emergency care** to save lives during the “golden hour”.
- **Non-Communicable Diseases (NCDs)** – with the launch of Ayushman Bharat Health and Wellness Centres, primary care now includes screening and management of chronic diseases like diabetes, hypertension, heart disease and cancers. This **Comprehensive Primary Health Care (CPHC)** approach widens PHC scope to “womb-to-tomb” care, addressing rising lifestyle diseases alongside traditional infectious diseases.
- **Basic laboratory and Diagnostic services** – Blood Test, ECG, Ultrasound, X-Ray, Blood Pressure, Rapid diagnostic kits for pregnancy, Malaria, Dengue, Urine.



Internal Sections Side

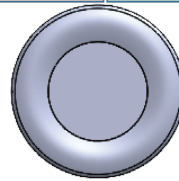
Electrical Section Product Section Utility Section

- 4 Solar panels
1240mm X 1000mm
X 35mm
- Mounting frame
- Refrigerator
(mini bar)
- Generator
- Inverter & battery
cabinet
- Electric winch



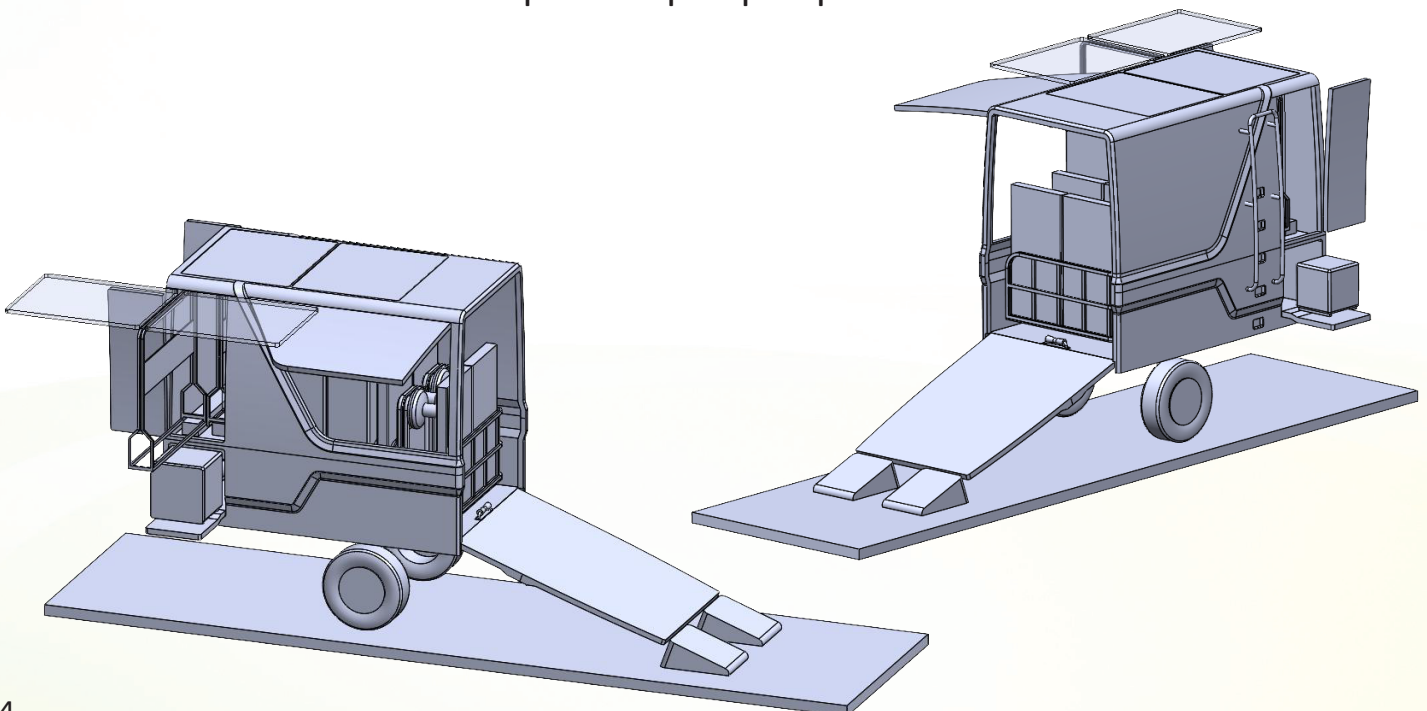
- Aluminium trolley
on wheels
- 4 Pedestal fans
- 4 folding chairs
- 4 Folding beds

- 1 X MS pallet with 36
aluminium boxes



Ramp for Winching Loading & Unloading

All panels open perspective



Portable Primary Health Center

An agile, Van-based PHC that brings a fully functional clinic to remote communities. Adapted from India's DHARMA portable hospital concept, it uses compact "mini-cubes" to deliver primary care, diagnostics, minor procedures, emergency stabilization and public-health services at the doorstep in a specially designed Mini-Van.



Individual Render - Ramp Open + Pallet Down

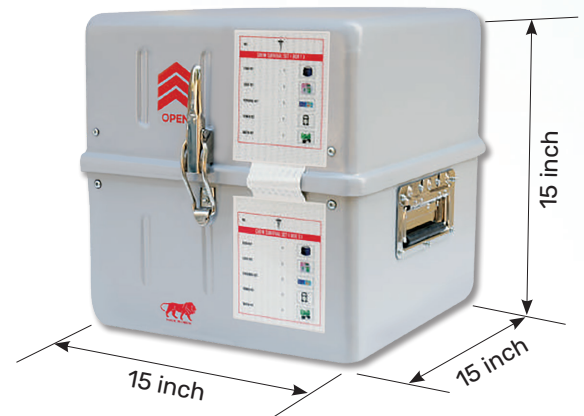




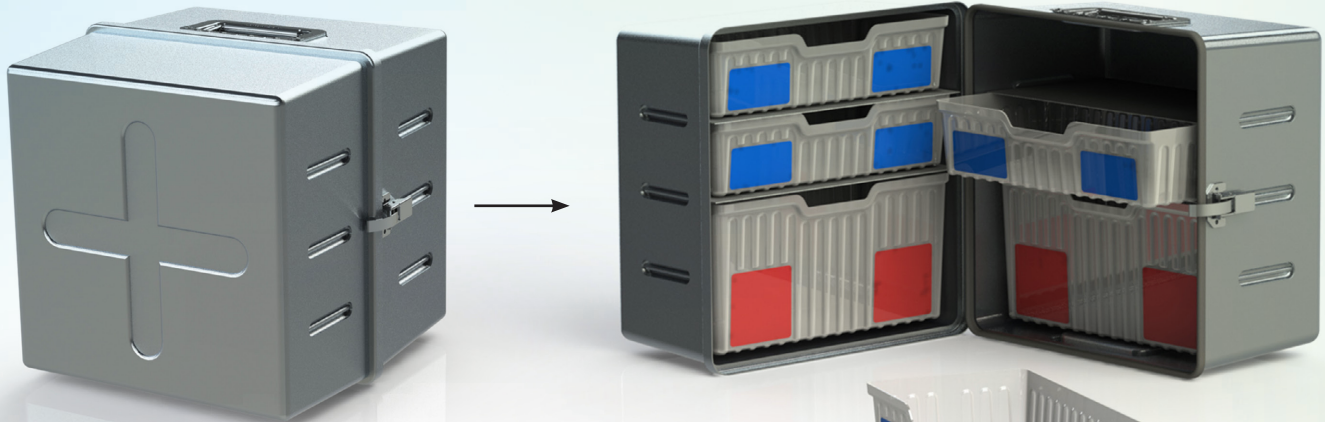
DHARMA Pallet Core of the Portable PHC

CARRIES - 36 MINI CUBES
TRANSPORTS - UPTO 900 KG
CAN BE WINCHED IN & OUT
OF TRUCK

EACH CUBE MEASURES
15 X 15 X 15 INCHES.
CAN CARY: UPTO 20KG



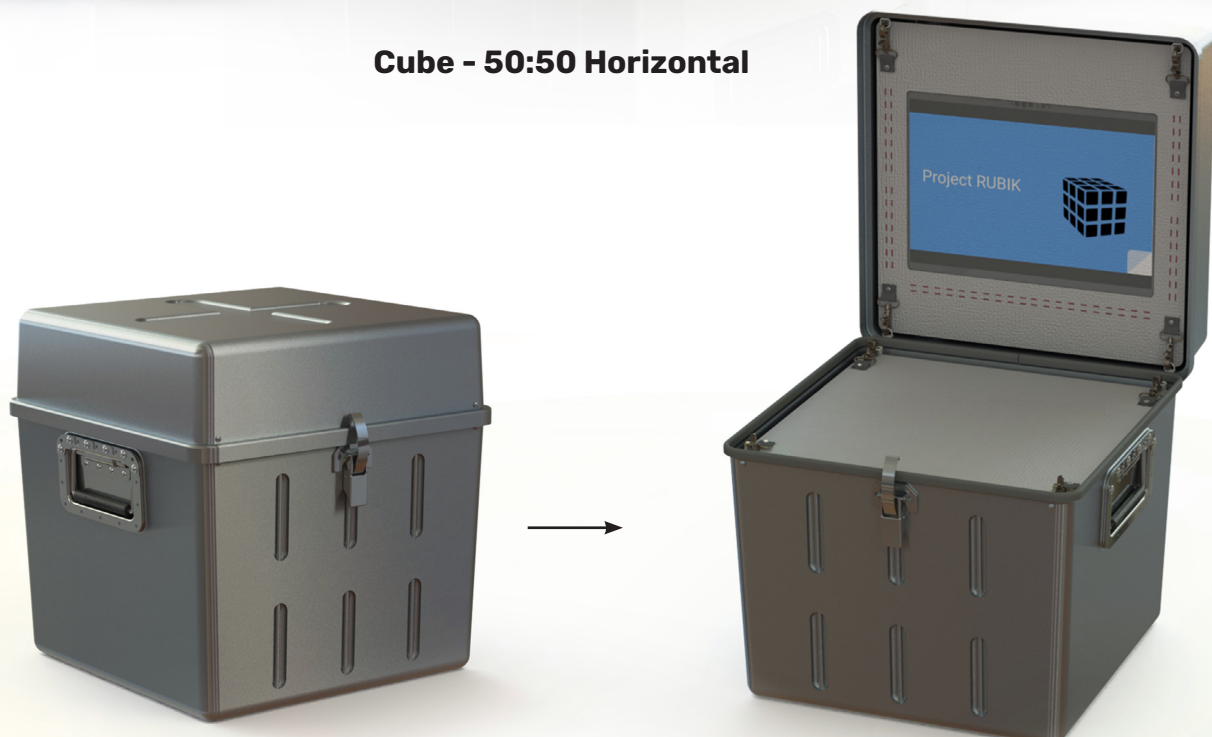
Life-Saving Mini Cubes - Exploded



Cube - 50:50 Vertical



Cube - 50:50 Horizontal



Cube - 25:75 with Tablet PC





Advantages of Portable PHC

As it is mobile and it takes only 20-30 minutes to set up, it can have a camp in one village from 9AM to 1PM and in the second village from 2pm to 6pm, therefore covering 2 places. If the same places are covered twice a week, the same Portable PHC can cover 6 villages every week. This leads to :-

- Savings of capital costs of building 6 permanent PHC's v/s only 1 Portable PHC. Thus cost of building + cost of diagnostic equipment is saved.
- Saving of Manpower Only 1 doctor and 1 paramedic can run the center in all these 6 villages. If the number of patients is higher, they will also need 1 Lab technician & 1 radiologist.
- Vaccination camps like polio, immunization or any epidemic can be easily done too.
- If the population of a village is very less, say 3000-4000, it is not commercially viable to set up an independent PHC there. In such cases 1 portable PHC can be sufficient for 3-4 such remote villages.
- As compared to Mobile Medical Vans currently in use for Awareness campaigns, Blood donation, Immunization etc, which are built at 6 times the cost of such a Truck, their capacity to transport so much equipment and consumables is quite less in those medical vans.

Power Sources

Solar Panel

-  **Extra Power**
-  **Extra Life**
-  **Double-Sided Power Generation**
-  **Excellent anti-LeTID & anti-PID performance**
-  **Lower temperature coefficient**
-  **Lower LCOE & System cost**

- Module Efficiency >22%**
- Power Tolerance up to 4.99W**
- 30 Years Performance Warranty**
- 12 Years Product Warranty**
- PID Resistant**
- Outstanding Aesthetic Design**



Inverter

Model Number/Name	Elithium 3532
Nominal DC Voltage	25.6V
Input Power at Peak Load	2500 Watts
Switching Element	MOSFET
Nominal Battery Voltage	25.6V
Nominal Output Voltage	220V
Nominal Output Frequency	50Hz
Max. Output Nominal Current	9.5 Amps

HEAVY LOADS : Runs your 1.5T inv AC on EL 3532 • Built to withstand overloads up to 200%

PREMIUM DESIGN : Wall mounted sleek design • Minimalist colours to match your decor • No more shoddy battery wiring

LITHIUM ADVANTAGE : Zero battery maintenance • Works well with heavy motor loads • Longer life and more kWh per cycle

PLUG N PLAY : LFP battery, factory-fitted and connected • Easily connect PV, GRID and LOADS • DIY System, needs zero expertise to install



Generator

Model	UI-15i
Max AC. Output VA	1200
Rated AC. Output VA	990
Type OHV25°Inclined, Single Cylinder, 4 Strokes, S.I, Forced Air Cooling	
Maximum Power	3.0 hp @ 3600rpm
Displacement	98cc
Starting System	Recoil Start
Fuel	Petrol
Tank Capacity	Petrol -2 Ltr.
Gross weight-KG	16.7 KG
Dimension LxWxH (mm)	355 X 350 x 380



Advanced Medical Equipments



Portable Ultrasound



Portable X-Ray Machine



ECG Machine



Defibrillator



Portable Blood Test Lab



Oxygen Generator / Concentrator



Blood & Fluid Warmer



Infusion Pump



Glucometer



**Rapid Diagnostic Kits
for Malaria, Dengue,
Pregnancy, Urine**



Autoclave



Suction Machine

Vehicle Choices



Platform: TATA Intra

Wheel Base: 2450 mm

Load Capacity: 1500 ton

Model: V20AC

Ground Clearance: 175 mm

Tyre Size: 165R14



Platform: TATA Yodha

Wheel Base: 3300 mm

Load Capacity: 1700 ton

Model: Pickup1700

Ground Clearance: 210 mm

Tyre Size: 215/75R16

Vehicle Choices



Platform: Mahindra Veero

Wheel Base: 2550 mm

Load Capacity: 1400 ton

Model: V2A

Ground Clearance: 216mm

Tyre Size: 195R15



Platform: Mahindra Bolero

Wheel Base: 3264 mm

Load Capacity: 1300 ton

Model: Pickup 4WD

Ground Clearance: 200 mm

Tyre Size: 215/75R15



DHARMA Portable Primary Health Center

An agile, van-based PHC that brings a fully functional clinic to remote communities. Adapted from India's DHARMA portable hospital concept, it uses compact "mini-cubes" to deliver primary care, diagnostics, minor procedures, emergency stabilisation, and public-health services **at the doorstep**.

What it is at the core

- **Modular 36-cube system:** 36 indexed mini-cubes (15x15x15 inches) docked in frames; lightweight, rugged, field-ready to carry various Pharma products.
- **Rapid setup:** unfolds into a working clinic in 15–30 minutes and can be assembled back and loaded back into the truck by 2 persons within 20 minutes.

What it carries

- **On-board power & cold-chain:** solar + inverter + generator; medical refrigerator (+2 to +8 °C) and carriers for vaccines/temperature-sensitive meds.
- **Water, sterilisation & waste:** clean-water supply, instrument sterilisation, and BMW-compliant sharps/bio waste handling.
- **4 Inspection Beds, Fans, Chairs and Tents.**

How it runs

- **Triage-ready layout:** door-side registration/triage, exam couch, dressing/minor-procedure bay, privacy bay.
- **Clear indexing:** cube map (Cube 1–36) + simple SOP cards; fast retrieval.
- Tiered care (open in order):
 - **Tier-1:** common fevers/infections, MCH, minor wounds/trauma.
 - **Tier-2:** diagnostics & OPD tools (POCT lab, portable X-ray, ultrasound, ECG).
 - **Tier-3:** emergency stabilisation (airway, oxygen, IV/IO, defib), chronic-disease meds, immunisation logistics.
 - **Tier-4:** public-health kits, vector/water safety, PPE, storage & operations support.

With a **4-person core team** (doctor, lab assistant, paramedic, trained dai) and parallel lanes (registration/triage → vitals/POCT → doctor for flagged cases & protocol-based simple-care lane → pharmacy hand-out), a 6–7-hour camp can process ~500 patients in a single continuous session—tested, treated, counselled, and the sickest stabilised for referral.

Why it matters

- **Cuts time-to-care** in hard-to-reach habitations.
- **Replaces referrals with on-site diagnosis/treatment** whenever safe.
- **Aligns with AB-HWC/NHM:** a mobile HWC that standardises quality, cold-chain, SOPs, and reporting—without new buildings.



Operational Advantages of the Bhism Cube Mobile PHC

- **High-volume throughput:** Handles ~500 patients in a single 6–7-hour camp via parallel lanes and protocol-based care.
- **Same-day closure:** ≥75% OPD cases resolved on-site with point-of-care testing and standard order sets; only true red-flags referred.
- **Golden-hour stabilisation:** Triage-to-oxygen ≤5 min; triage-to-IV access ≤10 min; ECG/defib available for time-critical events.
- **Smart referrals:** Predefined triggers, **stabilise-then-transfer** workflow, prefilled referral notes, phone handoff; 48-hour follow-up register.
- **Continuity & coverage:** Fixed village circuits; chronic-disease registers with refills; ANM/ASHA mobilisation for ANC, immunisation, and follow-ups.
- **Accountability & quality:** Cube-wise inventory checks, ILR temperature logs, BMW audits; **same-day HMIS/eVIN/IDSP** data upload.
- **Staff efficiency:** One 4-member team delivers full PHC scope with predictable roles, reducing avoidable load on CHC/DH.
- **Equity & readiness:** Reaches last-mile hamlets and pop-ups (schools/Anganwadi's); disaster/epidemic ready without site prep.
- **Programmatic fit:** Drops into **AB-HWC/NHM** weekly calendars and existing drug/vaccine supply chains; procurement-friendly standard packs.

Conclusion:

The Bhism Cube mobile PHC model combines **innovation with practicality** – it leverages cutting-edge modular design with portability to solve age-old problems of rural healthcare delivery. This represents a high-impact, scalable solution: it maximizes healthcare reach and effectiveness without waiting for new buildings or a large workforce increase. By **taking the clinic to the community**, it saves lives, improves health outcomes, and exemplifies the logical next step in primary healthcare evolution – a step that is persuasive not just in concept, but in the tangible benefits it delivers on the ground. The BHISM Portable PHC is ready to roll in service of **Sarvodaya – health for all, right at their doorstep.**





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