

2.4.2.1.1 Re-purposed containers/wagons or barges

Where no firm ground can be found or where tents cannot provide security for stock, it is possible to use shipping containers as temporary storage. If a container is used for long-term storage, it needs to be repurposed to create optimal conditions for its maintenance and for the items stored.

Air circulation:

- Place the container on concrete blocks, and – if relevant – secure it and the blocks into the ground, to prevent it being blown over in a cyclone/hurricane.
- Ensure a perimeter of at least one metre around the container.
- Ensure the container has lateral ventilation to allow cool air inside the container (an opening to the side of the container, that needs to be waterproof). If vents are not installed, have them cut into the container.
- Ensure there is roof ventilation by installing waterproof turbine ventilators to allow hot air to get out.

Characteristics of the ventilator

- Galvanized steel or aluminium
- Lubricated track system
- Min. diameter: 12"/30 cm
- Min. height: 12"/30 cm
- Min. number of vanes: 20



Place the container on 10" reinforced concrete blocks, repair it where necessary and make it weather and rust proof (1 inch = 2,5 cm).



Make 4 to 8 rodent proof lower lateral 12" x 12" air vents by drilling series of 1/2" holes through the inner groove of the container wall. (Inside view)



Cover these air vents on the outside with home made moulded galvanized steel plates welded 3/4 around to prevent vertical & lateral water infiltration.



Apply 2 coats of anti-corrosion white paint inside and outside the container. Cover the air vents on the inside with mosquito screening to prevent insect infestation.



Cut out the opening for the turbine ventilator and weld a (4") inch circular turbine base to the opening. (The base must not stick out more than (2") inches).



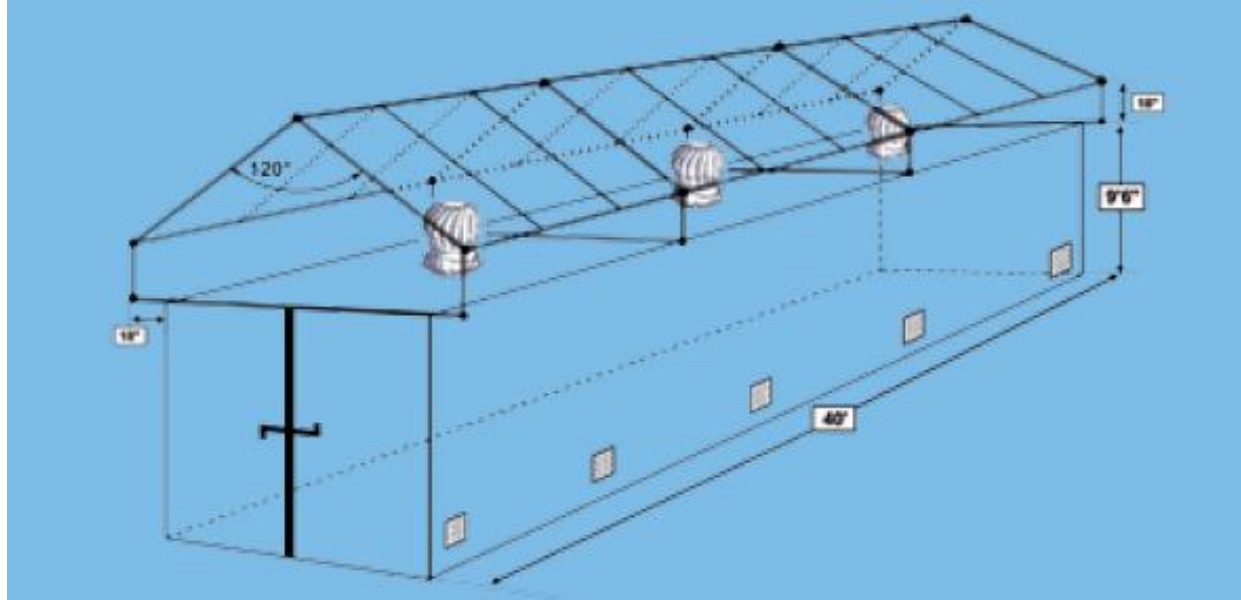
Place the 12" diameter turbine ventilator into the welded base and bolt it to it for added security. The rotating vanes will prevent rain penetration.



Build a roof (canopy structure, tin roofing, ...) preferable with an angle of 120° and fix it to the container.

The container should be retrofitted, as in the below diagram. The pointed roof (at a 120-degree angle) is preferable, as it will provide better protection from heavy rain.

40' HC Tropical Mobile Storage Unit (TMSU) - Perspective View



The major risks to a container storage unit are adverse weather and pests. Accurate roofing, anti-corrosion and anti-rust measures will protect against adverse weather. Netting and regular maintenance will prevent damage from pests.

Train wagons and barges can be retrofitted in a similar way.

Using barges for storage is an option, but not a preferred one: it is much more difficult to maintain good storage conditions in a humid environment (even if the barge is out of the water, the humidity inside it will be a problem). If using a barge for storage, make sure ventilation is guaranteed through similar processes as for a container, and measure humidity levels carefully, using a hygrometer where possible.