

**EFFICIENT
SMART
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***Application Instructions Manual
E-Flex Aseptic Flexitanks***

210507

LiquA

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What is Aseptic Flexitank?

The Aseptic Flexitank provides a sterile environment to transport perishable liquids. It protects the cargo against contamination. With an aseptic flexitank, it's possible to transport liquids like milk and juices without having to worry about them becoming contaminated.

After we pack and seal the flexitank, we apply 15 kGy of gamma irradiation, which guarantees an aseptic environment during transportation.

Sterilization with gamma rays is one of the most reliable, effective and common alternative sterilization methods used today. Gamma rays remove electrons from the atoms of substances, which is a process called ionization. Free electrons can detach DNA molecules from living organisms, which is fatal to microorganisms such as bacteria, yeast, and mold.



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What is Aseptic Flexitank?

A flexitank with regular valve will lose its aseptic property if it is not coupled to the filling hose aseptically. At LiquA, we have developed a sophisticated aseptic valve which allows for sterilization when the valve is connected to the extension hose.

Our patented thermoplastic valve uses two-entry steam jets for cleaning. Saturated steam is blown between the flexitank and the valve. During the steam application, steam and condensed water from steam gets drained. A safe filling is initiated after that.



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Contents of the Box



Open the E-Flex box and ensure that the following are in the package:

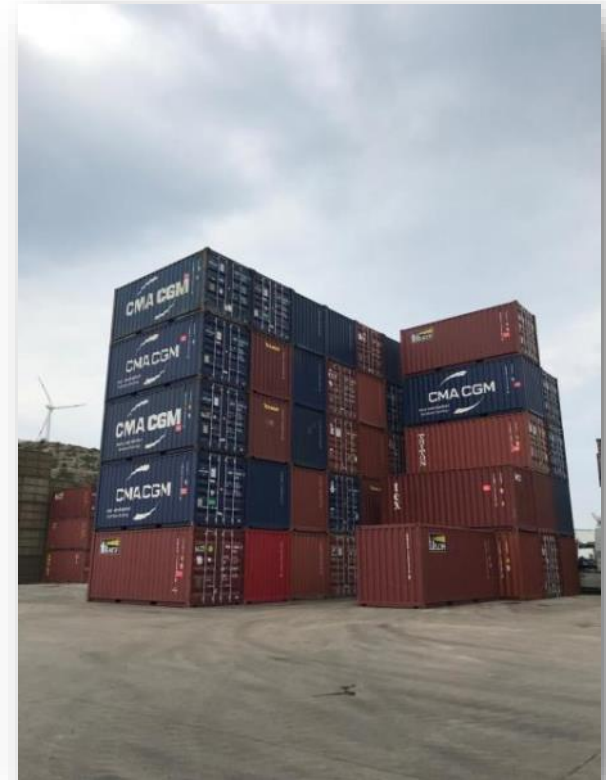
1. E-Flex
2. Warning labels
3. Adhesive tapes
4. Cable ties

**The box will be used as door protection board.
DO NOT throw it away!**

Container Selection

Ensure the below for the containers...

- No older than 5 years.
IMPORTANT: The above is the requirement of Container Owners Assosiation. If it is not applicable ensure that below conditions are obtained.
- Manufactured according to ISO 668 norm.
- Weight tested to a minimum of 28,000kg.
- Clean, structurally sound and in excellent condition.
- No repairs on side walls and there is no damage to the floor.
- Use food grade containers only, that are free of any odor.
- There are no insects, soil or contaminants that may cause customs issues at the destination.



Container Selection

DO NOT use damaged/broken containers like below.
Broken containers can be rejected by the shipping lines.



Bulged Container



Damaged Container

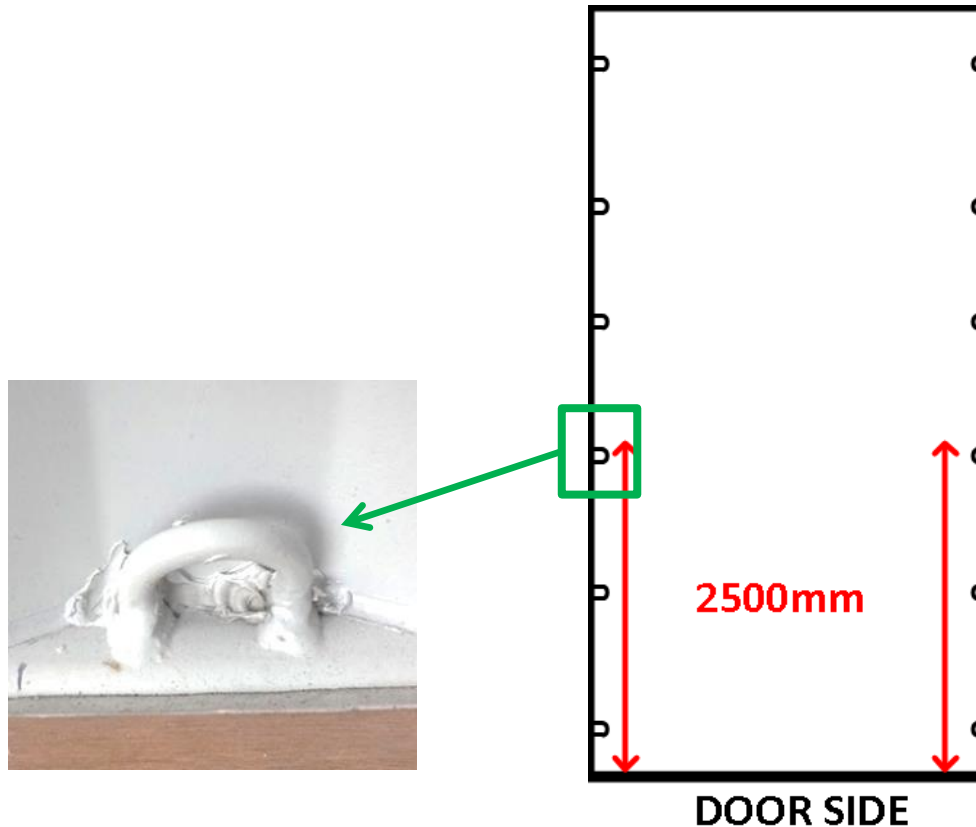
Container Selection

- Use **ONLY** standard containers designed according to ISO 668 international norm.
- Ensure that containers have lashing rings on the floor.



Container Selection

Central lug position may differ from one container to another.
Ensure that there are lugs positioned at least 250cm from the doors.

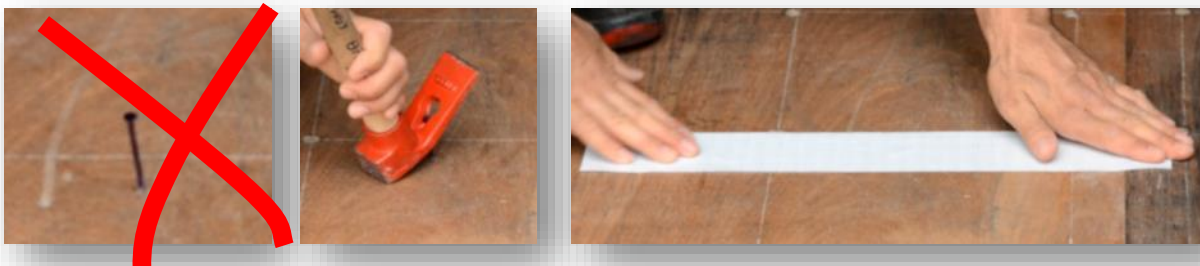


Container Selection

- Sweep the container carefully with a broom.
- Ensure that the door bolts are silicon covered.



- Ensure that nails, sharp and rough objects that may damage/puncture the flexitank are removed.
- Cover uneven areas on the walls and on the floor with duck tape (thick tape).

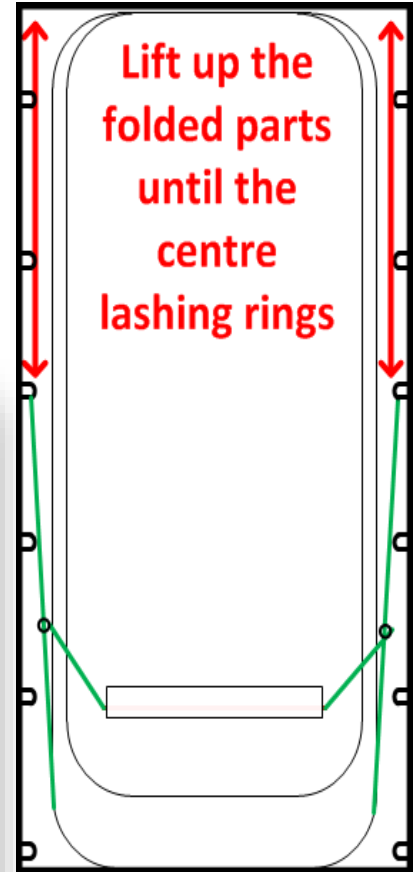
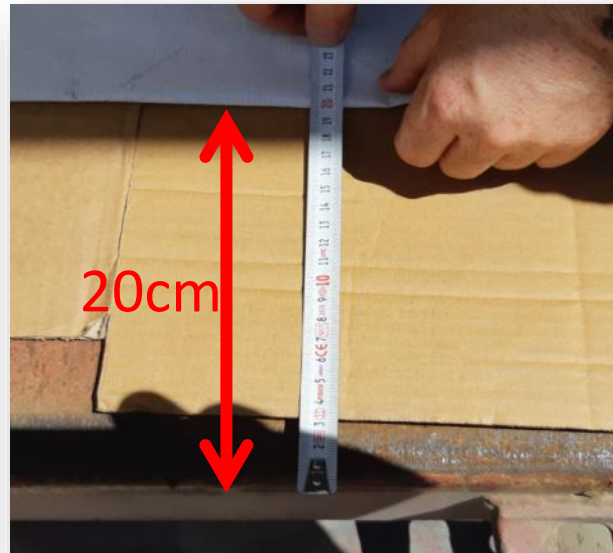


Fitting

Lift up the folded part of the pool at the front wall end and tape it to the wall with duck tapes.

Lift up the folded part at the sidewalls and tape them to the side walls until the lashing ring which the flexitank belts tied.

The distance between the pool and the outer end of the container must be **20cm**.



Container DOOR Side

I Fitting

Position the E-Flex to the edge of the right door.

Unroll the E-Flex.

DO NOT step on the E-Flex while unrolling.



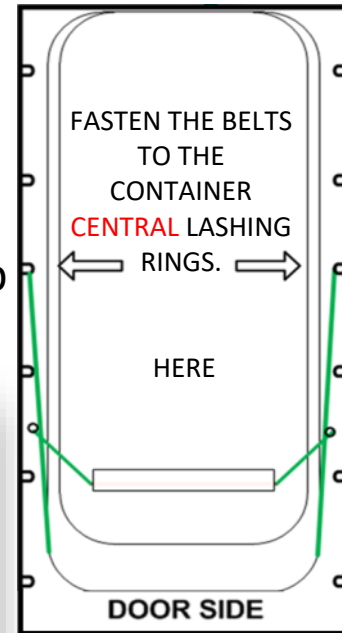
Fitting

Pull out the lashing belts. Get the lashing belts pass through the pre-cuts marked in **green** color.

E-Flex must be fastened to the lashing rings/lugs on the container floor in order to stabilize the flexitank during the transportation.

While the end of the flexitank is still resting on the front wall and the strap is “taut but not tight”, tie the lashing strap to the **CENTER** lug/lashing ring.

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Fitting

Lift up the folded part of the pool at the container door side and tape it to the walls with duck tapes.



Cover the container side-walls with provided PP fabric.



| Warning

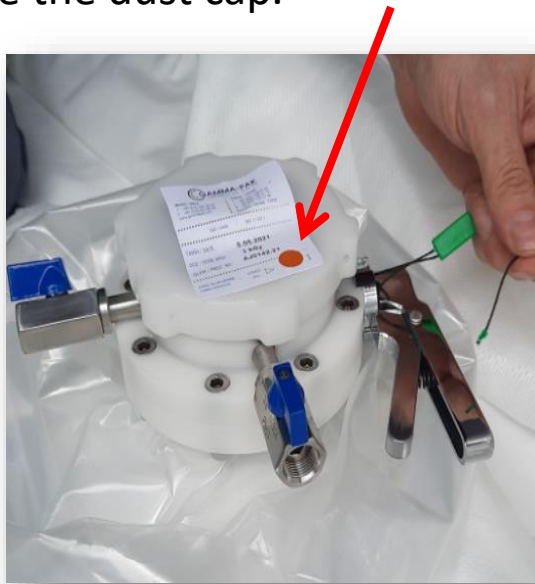
IMPROPER FITTING MAY CAUSE CAPACITY PROBLEMS, INNER LAYERS MAY GET STUCK AND STRETCH. THIS MAY CAUSE SEVERE LEAKINGS. ONLY TRAINED AND LICENSED OPERATORS ARE ALLOWED TO FIT OUR FLEXITANKS.

IF FITTING OPERATION HAS BEEN PERFORMED AT ANOTHER LOCATION, PLEASE ENSURE THAT THE E-FLEX HAS NOT MOVED DURING LOCAL TRANSPORTATION.

Coupling

IMPORTANT: Do NOT open the filling valve until the entire steam operation completed.

- Remove the protective plastic cover to reveal the thermoplastic valve.
- **DO NOT** use any flexitank without the **red** Gamma Irradiation dot/indicator.
- Break the hygiene seal.
- Remove the dust cap.



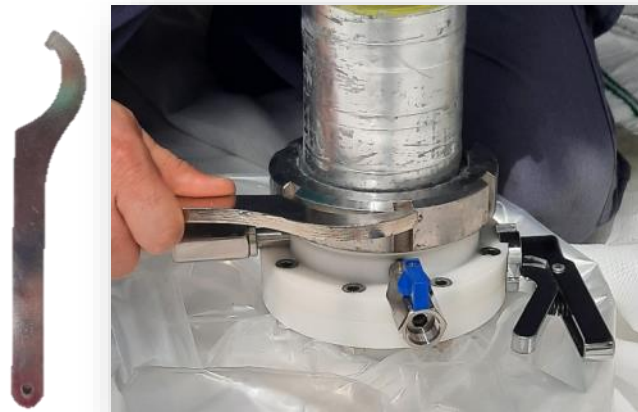
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Coupling

Our 3' Aseptic Valve with Jets has 3" Dairy connection EN 11851.



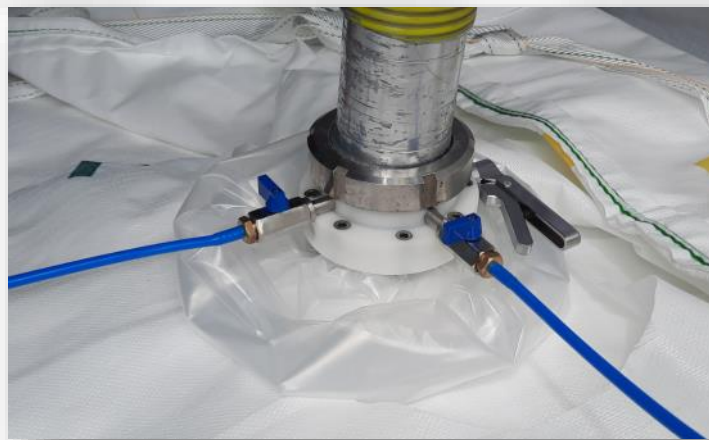
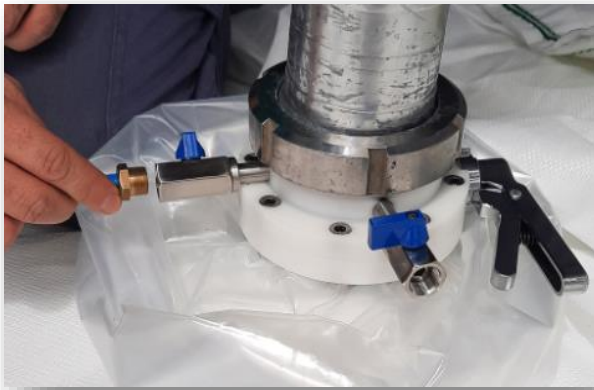
Couple the hose with the valve.



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Coupling

Connect the Steam Inlet and the Steam Outlet.



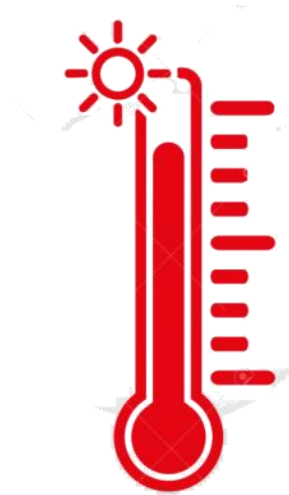
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Steam Application

- While the filling valve is in closed position, open both steam inlet and outlet.
- Use saturated steam
- Blow the steam from the Steam Inlet.
- Ensure that the steam pressure is less than 2bars.
- Steam temperature must be between 100 – 120 degrees Celsius.
- Measure the temperature with a laser thermometer during the process. **Ensure that you measured 100 C for at least one minute.**
- Steam treatment can be applied for maximum 7minutes.
- Assure that the flexitank valve and Extension Hose is completely deaerated before starting the filling process.



Warning



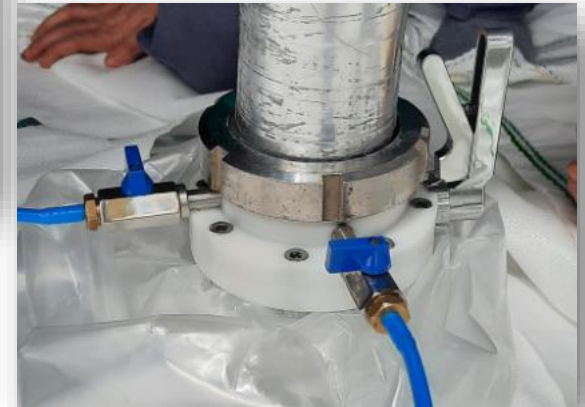
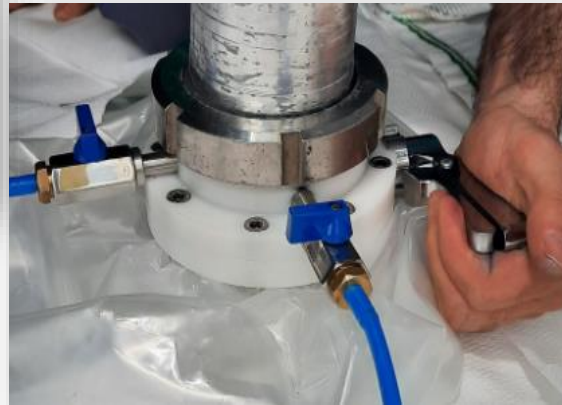
If you cannot achieve the temperature of 100C for one minute long within 7 minutes,

1. Terminate the application.
2. Wait for 15minutes to cool down.
3. Check steam supply performance.
4. Start all over again.

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Filling

Close both Steam Inlet and Steam Outlet, open the Flexitank Valve.



Filling

Suspend the hose to assure that the flexitank valve **DOES NOT** get any stress during the entire filling Operation.



Filling

Start Filling.

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Filling

Ensure that flexitank is filled up to its nominal capacity.

Follow the relevant flexitank loading instruction manual which provided by LiquA for loading operation.

When the filling is completed;

1. Close the valve. Ensure that the valve is locked.
2. Remove the hose.
3. Clean the valve.
4. Close the dust cap.
5. Ensure that bonnet is well tied according to our instructions.



Door Protection

- The flexible harness prevents any flexitank movement. However to make sure that any sharp object/bolts on the door does not damage the flexitank, the carton box should be collapsed and used for protection.
- The box will be used as a door protector. Collapse the box as shown.



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Door Protection

- Suspend the boards to the door closing bars.



Check List

- Fill in the provided Check List and stick it to the door on the right hand side.



Warning Labels

- Stick the warning labels on the side walls and the doors of the container.
- Clean the surface of the container prior to sticking the label for better adherence.



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