

**EFFICIENT
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Fitting and Filling Instructions Manual
E-Flex Easy Flexitank

Rev09-220131

LiquA

| Flexitank article numbers (printed on the flexitank label) to be fitted according to this manual

- ROA.E001
- ROA.E0L1
- ROA.EC41
- AAA.EC41
- AAX.EC41
- AAX.E001
- AAX.E0L1



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

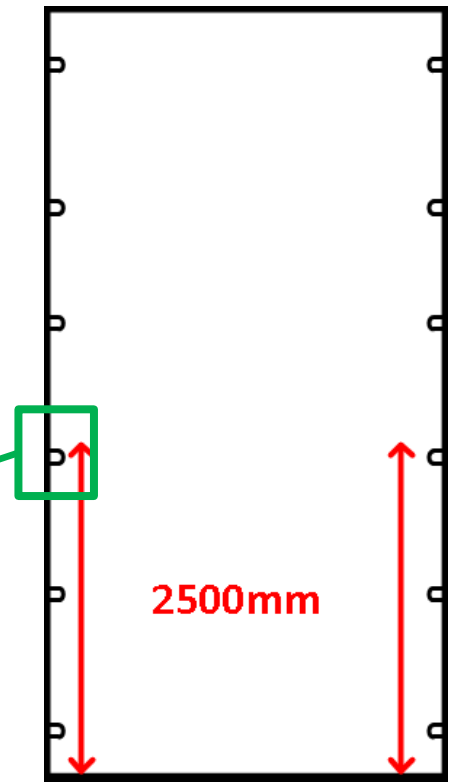
Container Selection

- 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.



2500mm

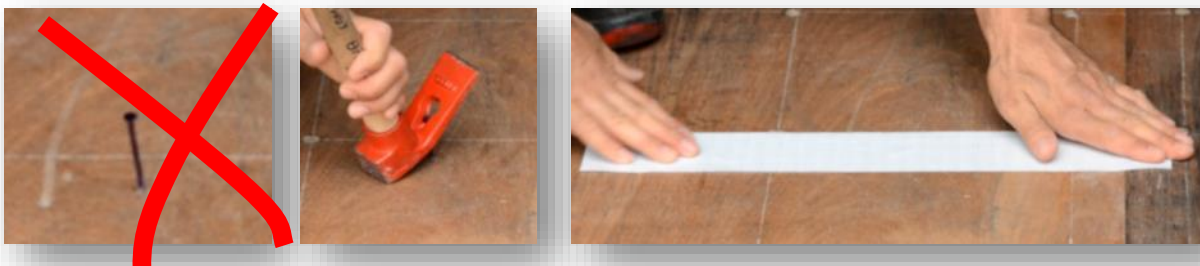
DOOR SIDE

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).



Container Lining

If the condition of the container is good and free of splinters, lining is not necessary; however, if you prefer to line the container, use a corrugated paper or if purchased, use the pp fabric provided by LiquA as shown below.



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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!**

Positioning the E-Flex

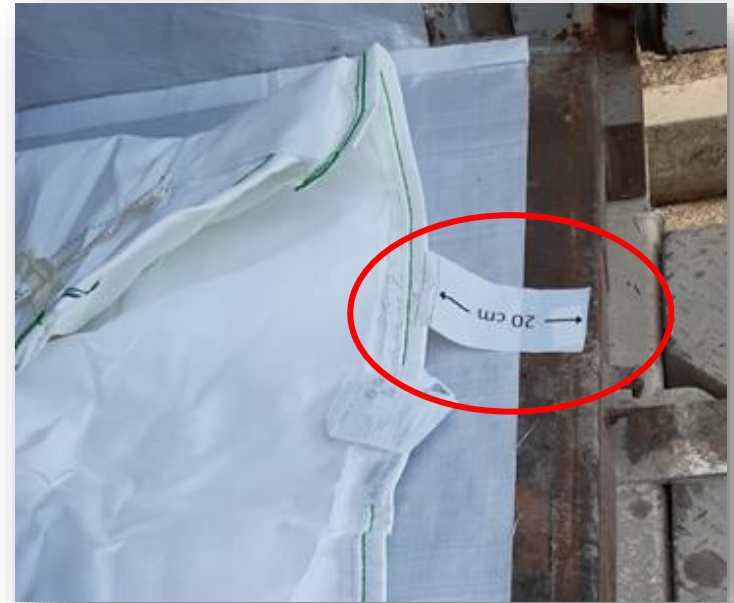


- Position the E-Flex leaning to right to the wall on the right hand side.
- Unroll the E-Flex towards the front wall
- Unfold the E-Flex towards the left wall.
- **DO NOT** step on the E-Flex with hard shoes while unrolling.



Positioning the E-Flex

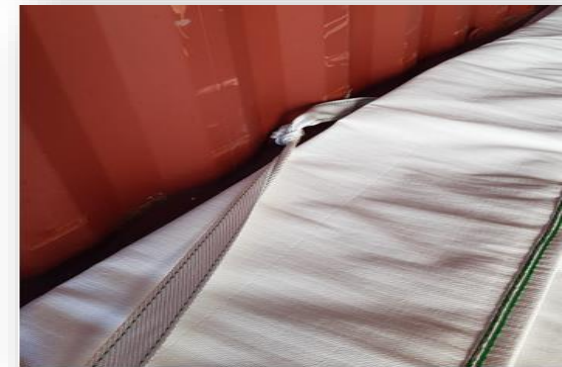
- The distance between the E-Flex and the outer end of the container (NOT where the wooden floor begins) must be **20 cm**. Use the label as a reference.



- Properly positioned E-Flex at the door side, covers the floor entirely and ends up at the front wall.

E-Flex Flexible Harness

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



E-Flex WARNING

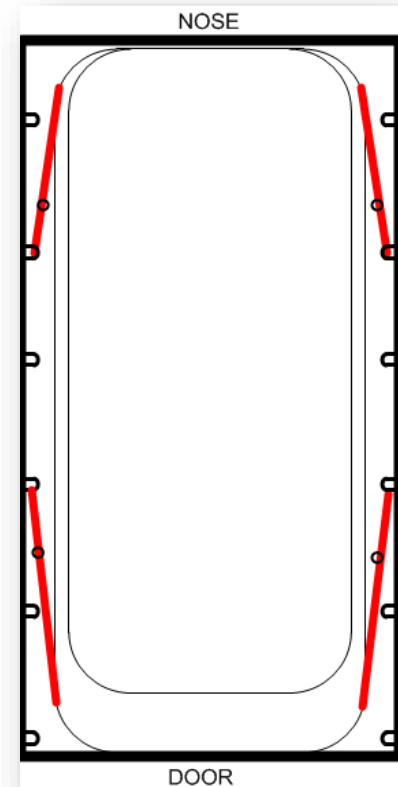
- DO NOT WEAR SHOES AT ANY TIME YOU WALK ON THE E-FLEX. STEPPING ON THE E-FLEX WITH ANY TYPE OF SHOES MIGHT CAUSE MICRO HOLES AND LEAD TO LEAKAGE.
- MINIMIZE THE TIME YOU SPEND ON THE E-FLEX WHILE LASHING THE BELTS.
- THE ZONE AROUND THE VALVE AREA IS THE MOST DELICATE PART OF THE E-FLEX FOR ANY EXTERNAL DAMAGE. AVOID STEPPING AROUND THE VALVE AT ANY TIME.
- DO NOT BRING IN OR USE ANY CUTTER/KNIFE WHILE YOU ARE INSIDE THE CONTAINER.



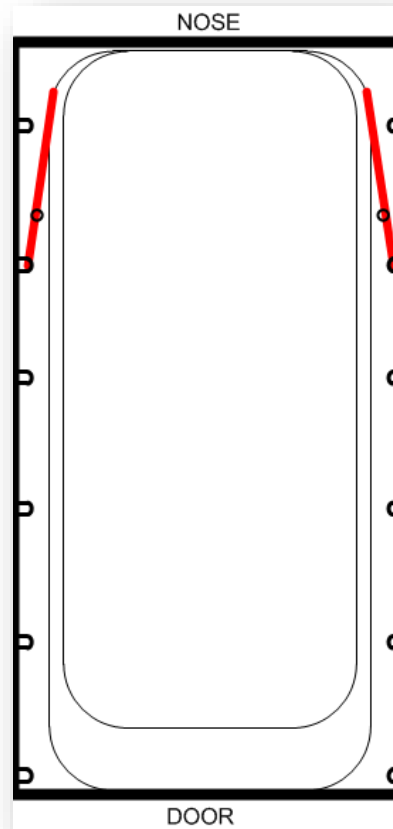
Belt Tying

Tie the lashing strap to the **CENTER** lug/lashing ring “taut but not tight”.

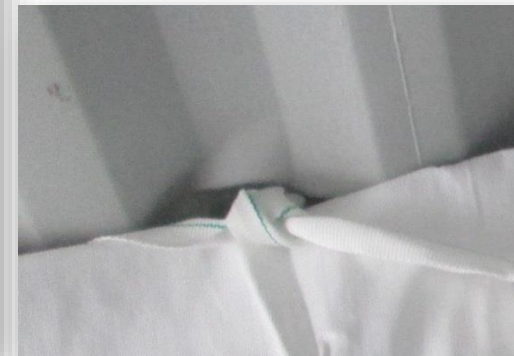
Central lug position may differ from one container to another that you may not find the lug positioned at the very center of the container. Ensure that the harnessing belts are tied to a lug positioned at least 250cm from the doors.



I Belt Tying (Nose Side)



Joining
Knot



- 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 first lug/lashing ring past the joining knot.
- **IMPORTANT:** In the case of a non-standard container, if the lashing strap cannot reach the first lug/lashing ring past the joining knot, tie the lashing strap of the first available lug that allows the flexitank to rest against the front wall as described above.

NOTE: The lashing straps must NOT restrict the flexi tank from expanding into the front wall. This may cause capacity loss.

Tying must be done by two operators!

Belt Tying

IMPORTANT:

E-Flex is designed such that it will stand at least 15cm away from the doors after the filling. Loose or improper tying will inactivate the harnessing system and may cause the E-Flex to shift/move towards the doors.

Also too tight/short belt tying may cause capacity loss and a possible damages.



ENSURE THAT BELTS ARE TIED TAUT BUT NOT TOO TIGHT.

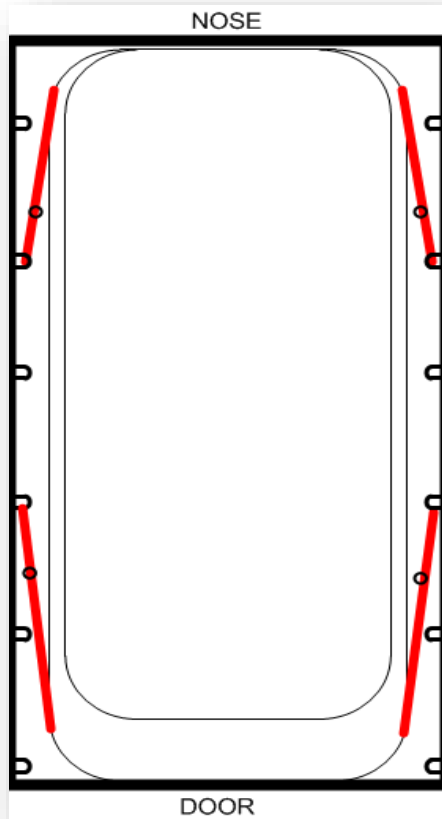
Belt Tying

- **DO NOT** remove the pre-folding tapes.



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Belt Tying



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.



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

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.

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.



I FAQ

What happens if I don't tie the harnessing belts?

You may consider the harnessing belts of E-Flex like the seat belt of your car. If you don't buckle your seat belt and no accident happens during your travel, you arrive to the final destination safely. However in case of an accident, due to lack of seat belt, you may die or get severely injured.

Same principal is valid for E-Flex. If you don't tie the harnessing belts, nothing may happen until the final destination but in the event of an impact or accident, flexitank may shift towards the doors and cause a severe damage.

Also, when the container arrives to the final destination, flexitank may bulge out of the container at the time consignee opens the door. This might create hazard to the operators.

Ensure that harnessing belts are tied according to LiquA instructions.

I FAQ

Do I necessarily need to line every container with a protective material?

No...

We ask you to clean the container and inspect the sharp objects on the container surface very carefully. If you feel confident about the conditions of the container, you do not need to line the container.

However, wooden floor of the containers may always have the possibility to contain splinters on the surface. Splinters as such may cause damage on the surface of the flexitank. We recommend lining the containers with carton boards or with pp woven material provided by LiquA.

IMPORTANT: Lining the container DOES NOT guarantee to protect E-Flex against splinters or sharp objects. Take necessary precautions as if there was no lining materials.

I FAQ

How important is it to position the E-Flex on the container floor?

It is very important...

20ft containers have 32m³ free space in it and we use up to 27m³ of it. We ask you to position the flexitank 20cm from the outer edge of the container. If E-Flex is positioned wrongly towards the front wall, every 10cm will cause capacity loss of 1m³.

Also E-Flex stands on the floor as a two dimensional object. Layers get open during the filling. Any mistake at the positioning of the E-Flex may cause inner layers to get trapped which may cause a rupture and leak.

Please follow this instruction very carefully.

I FAQ

If I shorten the belts, untie the knots or position the flexitank in a different location can I reduce the flexitank capacity?

No.

- DO NOT change position of E-Flex on the floor of the container.
- DO NOT untie the knots on the flexitank.
- DO NOT tie the harnessing belts to a different location other than shown at this manual.
- DO NOT change the foldings.
- DO NOT remove the guiding paper tapes on the E-Flex.

In the contrary, changing any of the above not only do not change the capacity but also creates a hazard which may end up with a leak. E-Flex is designed to be assembled as easy as possible. Our production team has already folded, knotted, taped and prearranged everything for an easy fitting. Do not change any of the above. Just unroll the E-Flex, position correctly and tie the belts to the proper lashing rings/lugs.

Changing any of the above DOES NOT reduce the capacity. Fill E-Flex within the tolerances mentioned at the label and datasheet.

FAQ

If the container is not in good condition, shall I use metal bars to support the side walls?

No, E-Flex is a self supporting flexitank and it does not exert pressure to the side walls.

Under no circumstances DO NOT use any metal bars.

It is not needed, it does not help, in the contrary, metal bars may create a hazard, damage the flexitank surface and cause a leak.

DO NOT use any material other than the ones you find in the E-Flex box.



Common Fitting Mistakes



DO NOT change the foldings



The distance must be 20 cm between the flexitank and the outer end of the container



The belt tying must be 'taut but not tight'

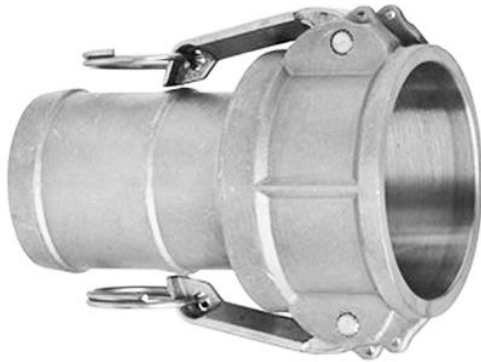
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Ready For Filling



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| Coupling



Our standard valve is 3" male camlock.

You will need to have a **3" female cam-lock** coupling. (DIN EN 14 420-7)

Upon request 2" reductor is available.

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Coupling



1. Break the hygiene seal.
2. Remove the dust cap.
3. Couple the hose.
4. Compress the latch.
5. Rotate the arm.
6. Unroll the bonnet.

I Coupling

Lock the valve from the camlock lugs with a cable tie for a safer valve connection.



Filling

- Start loading the E-Flex.
- **WARNING:** Ensure that the start up pumping speed does not exceed 300 lt /min until the E-Flex rises to an approximate height of 30cm (roughly the first 2-3,000 liters) , then increase the speed up to 600lt/min. Please ensure that the filling stations follow this instruction carefully.



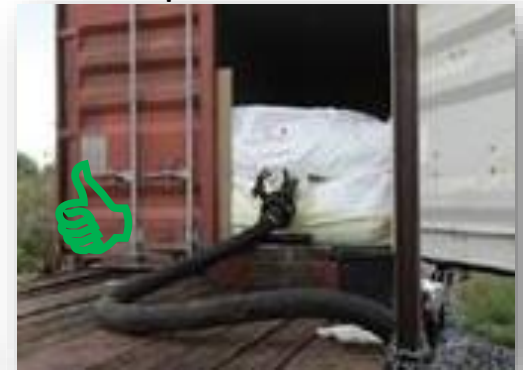
Filling

- Ensure that you have chosen a light weight filling hose.
- Couple the hose to the valve.
- Make sure that protective plastic cover `bonnet` is unrolled. It will avoid possible contamination due to spillage while decoupling.

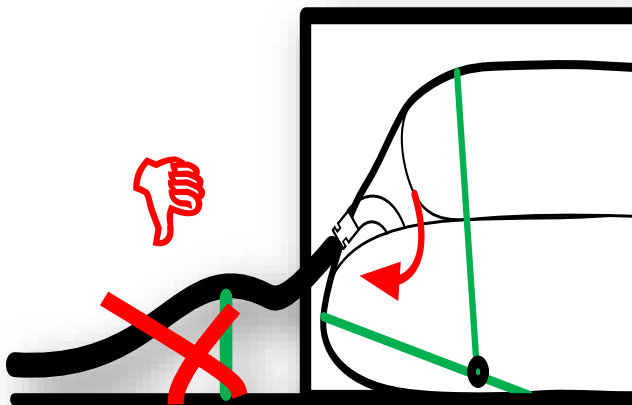


Supporting the Filling Hose

- Support the hose from the right point. Ensure that the hose is NOT put under any stress during the entire filling period.



- Hose support must be done very carefully. Support shall not create any torsion/stress over the valve.



Supporting the Filling Hose

- Our valve is not static and goes up during loading. Therefore, if the filling hose is supported with a tripod or similar, ensure that the support point is being changed periodically during the entire filling.



- If no hose support is being used, ensure that the hose does not exert any pressure to the valve. Ideal standing is shown at the picture.

Filling



After Loading;

1. Close the valve.
2. Remove the hose.
3. Fasten the dust cap

| Bonnet Closure

E-Flex has two protective bonnets around the inlet to prevent contamination and to act as secondary containment in case of an incident.

Ensure that Bonnet is well tied according to our instructions.



Bonnet Closure



The Protective Bonnet has two individual layers of plastic film.

Both layers must be tied **separately**.

1. Push back the outer bonnet to expose the inner bonnet for easy operation.
2. Twist the full length of the inner bonnet. Ensure that minimum amount of air/space is left in the bonnet.
3. Make a tight knot, as close as possible to the valve.
4. Unroll the outer bonnet.
5. Twist the full length of the inner bonnet. Ensure that minimum amount of air/space is left in the bonnet.
6. Make a tight knot, as close as possible to the valve.

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THANK YOU

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