1 Introduction

This manual is for the Vetus rigid plastic fresh water tanks.
See the drawings on Page 20 for dimensions. Tolerances of + or - 2% apply to all dimensions!

N.B. These Vetus rigid plastic fresh water tanks can also be used as waste water tanks. See the manual for waste water systems for this. Clean the tank if necessary.

2 Installation

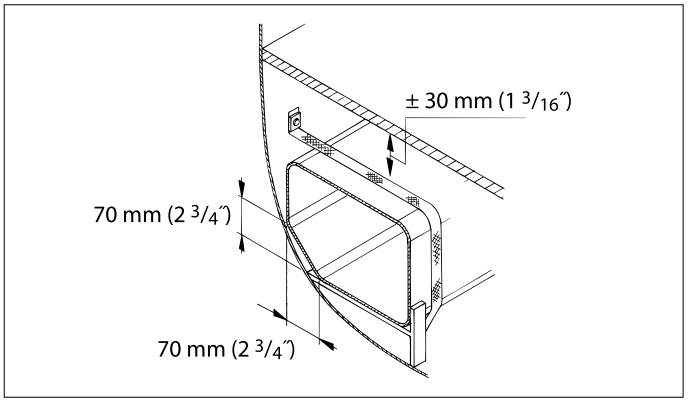
2.1 General

Take the following into account when choosing a position for the tank and the deck filler cap: the filler hose must be as short as possible, must slope down continuously from the deck cap to the tank and must be as straight as possible.

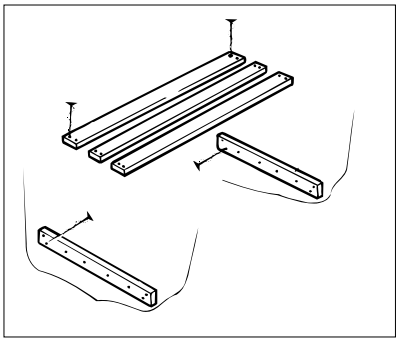
> ⚠ **NOTE!**
> The height difference between the tank and the filler cap may be a maximum of 2 metres (the maximum excess pressure in the tank is 20 kPa (0.2 bar)!)

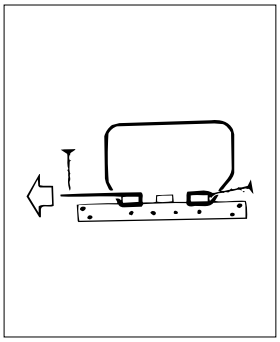
Positioning

- Position the tank in such a way that it is readily accessible for inspection.
- Also make sure that there is sufficient free space above the tank for the hose connections.
- These must be easily accessible during fitting. There must be free space with no bulkheads or other tanks of about 1 cm all round the tank to allow ventilation.

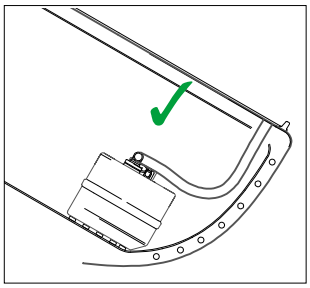


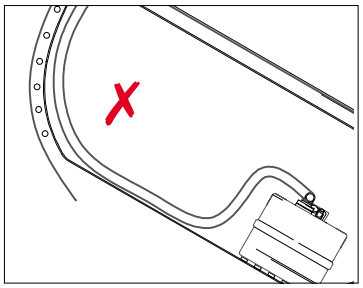
- Ensure that there is a sufficiently solid foundation for placing and fixing the tank firmly.
- **The size of the tank increases slightly when it is full.** Take this into account when fixing the tank in place.
- Use the fixing straps from the connection kit as these allow the tank to expand.





Fitting in sailing ships
When fitting remember that the filler hose must always be positioned on the same side of the ship as the tank.
This prevents too high a pressure from possibly occurring in the tank when sailing at an angle.

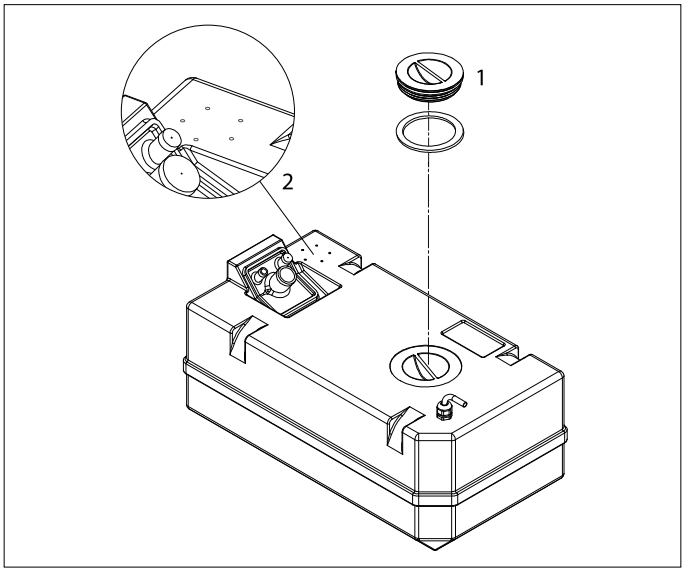




2.2 Tank fittings

Inspection lid
The inspection lid with packing ring (1) is already fitted in the tank.

Fitting a tank contents meter
The tank is already prepared (2) for quick fitting of a tank contents meter with SAE cartridge.



2.3 Connecting the tank

Use good quality reinforced hose to connect the tank. Avoid sharp kinks in the hose.
The reinforced hose must be of foodstuffs quality and at least resistant to a temperature of 60˚C and a pressure of 400 kPa (4 bar).

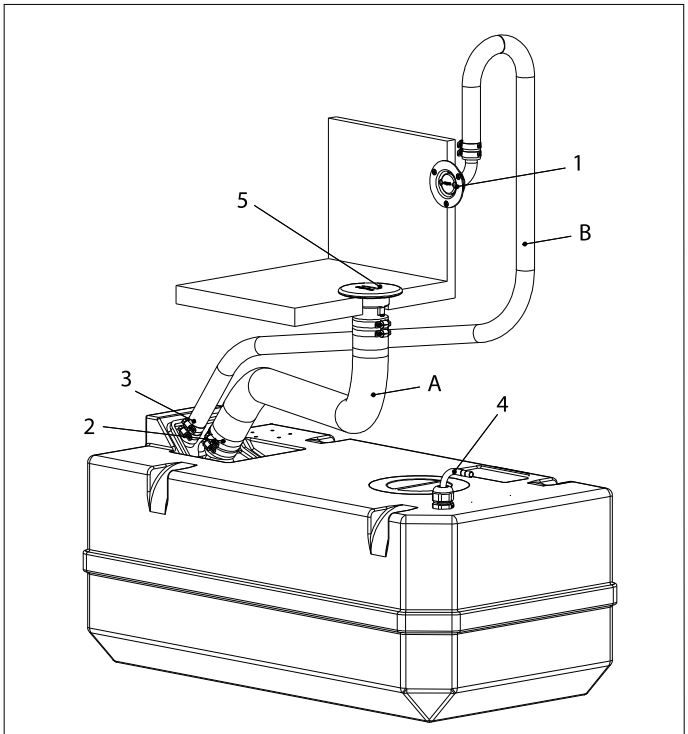
Vetus supplies a hose that is suitable for tap fresh water. This hose has no taste, is non-poisonous and resistant to temperatures from -5˚C to +65˚C.
Art. code:
DWHOSE12A, water hose int. ø 12 mm,
DWHOSE16A, water hose int. ø 16 mm and
DWHOSE38A, water hose int. ø 38 mm.
Use a good hose clamp for each hose connection.

Fit a filler hose A, internal diameter 38 mm, between the filler cap and the tank. Fit this hose so that neither the tank nor the filler cap is mechanically stressed.

Fit the breather nipple 1 as high as possible, **above the level of the top of the tank.** Choose a suitable place for the breather nipple so that rain or water from outside cannot penetrate.

Fit the breather pipe B, internal diameter 16 mm, between the breather nipple and the tank connection 3. The breather pipe must be fitted so that it is continuously sloping upwards as seen from the tank.

Fit the tap water pipe, internal diameter 16 mm, between connection point 4 and your pump. The pump must be self-priming. This may be fitted at any height relative to the tank.



1 Breather nipple
2 Filler connection
3 Tank connection
4 Connection point
5 Filler cap
A Filler hose
B Breather pipe

2.4 Check

Check the system for any leaks.
Test pressure 20 kPa (0.2 bar, 4.4 psi).

3 Use

Clean and disinfect the tank and the pipes before taking the water provision into use for the first time.
Disinfect the tank at least once a year preferably at the beginning of the sailing season.

Cleaning
Clean the inside of the tank with water and soda (2 oz. / 3 US gallon). Rinse the tank with clean tap water.

Disinfecting
When using for the first time:
Disinfect the tank by filling it with a solution of bleach in water (1 : 1000). Circulate this disinfecting mixture through the water system. Remove the solution and rinse the tank with clean water.

> ☞ **Tip**
>
> Calculation of the amount of common household bleach needed to disinfect the tank: Use 1 millilitre of bleach for each litre tank capacity. Or use 0.13 ounces (oz) of bleach for each US gallon of tank capacity.

At the beginning of the sailing season:
Disinfect the tank and prevent the growth of algae at the same time by filling the tank with a solution of clear vinegar in water (1 : 20). Leave the vinegar solution in the tank for at least 24 hours, the longer the better. Drain the solution and rinse the tank as follows: First rinse with clean water, then with a solution of baking powder and clean water (2 oz. / 3 US gallon) and then again with clean tap water.

Filling
Fill the tank with clean tap water. Always run water through the pipes from the tap on shore or the jetty before filling the tank.
If the tank has been dry for a long time or if the water has an unpleasant taste the cleaning and disinfecting procedure described above must be repeated before filling the tank.

Never top up a partly filled tank but always pump the tank empty first before refilling it. Water that has been in the tank for a long time could be contaminated!
The water level in the tank is visible through the tank wall!

> ☞ **Note**
>
> **Always fill a water tank with fresh water from a water pipe. Never fill the tank with water from a fire extinguishing system.**

Prevention of bacterial contamination and formation of algae
Water contaminated with bacteria or algae has an unpleasant taste. In order to prevent contamination by bacteria and the formation of algae, chlorine tablets can be added to the water (e.g. Certisil®, **not permitted in the Netherlands**) or as an alternative use 0.5 to 1 % clear vinegar or bleach.
Bacteria and algae develop much quicker at a higher ambient temperature than at a low temperature. Exposure of the tank to direct sunlight also speeds up the development of bacteria and algae.

4 Making ready for winter

The tank, pipes, pump, etc. must always be drained completely.

> ☞ **Note**
>
> **Never put anti-freeze in the tank or other parts of the water system to protect it against freezing, anti-freeze is very poisonous!**

5 Maintenance

- Check the breather nipple regularly and clean the sieve of the breather nipple if necessary.
- Check the hoses and hose connections for possible leaks annually and fit new hoses and/or hose clamps as necessary.
- Also check the tank for damage as a result of chafing. Replace a damaged tank immediately.
- Carry out the disinfection procedures described under 'Use' at the beginning of the sailing season.
- A tank and installation that is strongly contaminated by algae can be cleaned by rinsing the tank, the pump and pipes with a solution of bleach in water (1:20). Rinse the tank with clean tap water.

6 Technical details

Type water pipe	:	AISI 304
Capacity	:	40 l, 60 l, 80 l
Wall thickness of tanks	:	7 mm ± 1.5 mm
Material of tanks	:	mMPE (Metallocene Medium Density Polyethylene), color: green
Maximum permitted pressure	:	30 kPa (0.3 bar)

Dimensions of fittings:		
for suction hose	:	ø 12 mm
for breather	:	ø 16 mm
for filler hose	:	ø 38 mm