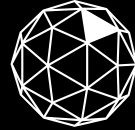


SECTIONAL TANK

INSTALLATION AND MAINTENANCE

INSTRUCTIONS

Manufacturing Tanks Since 1973



TRICEL
GENERATIONS OF INNOVATION



For more information contact us today at:
watersales@trichel.ie or www.trichelwater.ie

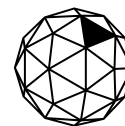
ASSOCIATION OF
TANK AND CISTERN
MANUFACTURERS
SETTING THE STANDARDS



APPROVED MEMBER



Checklist



TRICEL
GENERATIONS OF INNOVATION

Customer:

Project reference:

Tank size - external dimensions: x x mm

Nominal capacity: litres gallons

Tank type: Heavy cover ☐

 Heavy cover and insulated to Format 30 ☐

 Other ☐

Internal under water bolts: Galvanised mild steel ☐

 Stainless steel ☐

 We recommend that S/S bolts be used on the base of all tanks ☐

External bolts: Galvanised mild steel ☐

 Stainless steel ☐

Internal under water
stay system: Stainless steel ☐

Optional extras: Externally flanged base ☐

 Internally flanged base ☐

 Ball valve housing ☐

 Across tank divider ☐

 Along tank divider ☐

 Internal ladder ☐

 External ladder ☐

 Side access hatch ☐

 All half panels ☐

 Insulated base ☐

 Condensation tray ☐

Tank configuration:

Multiples of 1x1 meter plus 1/2 and 1/4 panels as necessary (metric)

Tank serial no:

Approximate deliver date:

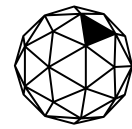
Other Information:

.....

TABLE OF CONTENTS.



1	Guidelines for locating water tanks	3
1.1	General	3
1.1.1	Water tanks on top of buildings.....	3
1.1.2	Guiderails on tank roofs – Health & safety requirements	3
1.1.3	Water tanks on elevated structures	3
1.1.4	Potable water tanks.....	3
2	Guidelines for different models of tanks	4
3	Tanks insulated and finished to Format 30	6
4	Format 30 fittings.....	6
4.1	Screened air inlet vent.	7
4.2	Screened overflow	7
5	Side access hatch.....	8
6	Ball valve housing	9
6.1	Ball valve housing specification	9
7	Condensation tray	10
8	Tank divisions	11
8.1	Maintenance on tanks with dividers	11
9	Pipe Connections for cold water storage tanks	11
9.1	Pipe connections for insulated cold water storage tanks.	13
10	Base details/design considerations (Metric)	14
11	Maintenance recommendations for sectional water storage tanks.....	17
12	Glossary of terms.....	19
13	Sample tank log book.....	21



TRICEL
GENERATIONS OF INNOVATION

1. Guidelines for locating water tanks

1.1 General

The following recommendations are generally for elevated tanks, as tanks at elevated positions can cause serious damage to the surrounding area in the event of wall, pipe or structural support failure resulting in water spilling out at a fast rate. Consideration must be given to minimise the effects of such an occurrence, in terms of the positioning of the tank and regular inspection.

- Water tanks should be located so as to prevent water damage or consequential loss in the event of leakage howsoever occurring.
- All tanks which are located above water sensitive areas should have a bund wall around them with adequate evacuation ducts.
- All other tanks should have Condensation or Drip trays to prevent nuisance damage and to keep floors dry.

Problems may arise with tanks due to failure of the structural supports underneath the tanks, contaminated water attacking the internal fittings, ball valve failure where overflows were not fitted, vandalism etc.

1.1.1 Water tanks on top of buildings

Water tanks located on top of any building should be sited at least 1.2 meters away from the edge of the building.

It would be preferable if the water tank was sited 1.5 times the height of the tank away from the edge of the building. In the event of failure, this would allow the water to spread itself over a much wider area before spilling over the edge of the building and possibly taking personnel or debris with it.

1.1.2 Guiderails on tank roofs – Health & safety requirements

Guiderails may be necessary to satisfy Health & Safety Regulations. The type of railing required is dependant on the tank height, distance from ground level, access etc. Please confirm which guiderail arrangement is required so that we can make the necessary inclusion. We can supply and install ladders and railings, but we must be informed of the exact details prior to quoting the project. We assume that the end user is making his own arrangements unless we are informed otherwise.

1.1.3 Water tanks on elevated structures

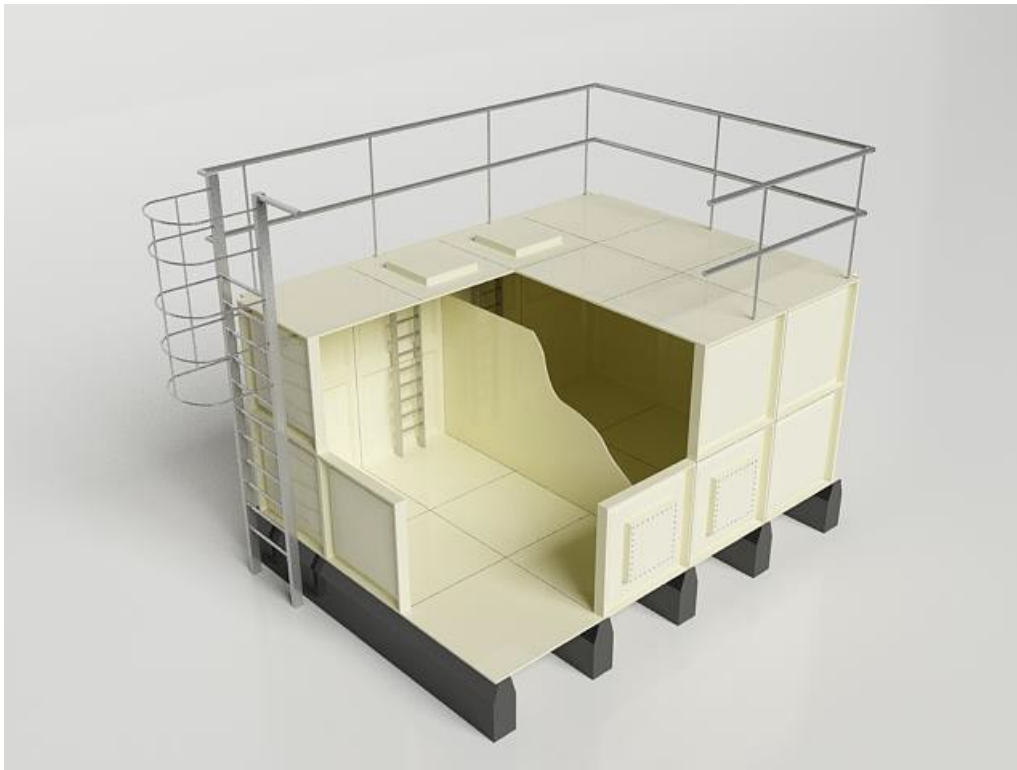
For water tanks located on top of elevated structures, a walkway of at least 1 meter should be provided around the water tank to allow for maintenance and inspection. This walkway should comply with health and safety regulations.

Potable water tanks

To comply with the Health & Safety Executive regulations on the Control of Legionellosis 1998, Cold Water Storage Tanks must be located in areas that are *“readily accessible for cleaning”*.

Regular Maintenance and Inspections as required by Health & Safety Legislation.

2. Guidelines for different models of tanks



Standard tank: This tank is complete with internally flanged base, externally flanged side walls. All under water stays are stainless steel and all external bolts are galvanised to BS EN ISO 1461:2009.

Heavy duty cover: Suitable for indoor and outdoor use, and for the storage of foul water. These tanks have internally flanged lid panels, similar to those used in the base.

Heavy duty cover and finished to Format 30: Suitable for indoor, outdoor use and for the storage of drinking water, as defined in our specification, Tricel (Killarney) Unlimited Company Format 30 on page 7.

Note:

- To comply with current legislation all tanks that store water that may be used for drinking must be protected, they must meet the requirements set out in the water byelaws
- BS EN 806-1:2000; -2:2005; -3:2006; -4:2010; -5:2012 & BS EN 858:2015 states that because any cold water tap is likely to be used to drink from, all such taps not directly connected to the mains shall be supplied only from tanks that are protected.
- Where drinking water has been stored in an inadequately protected tank, a water analysis should be considered and adequate protection installed.
- Tanks of over 1000 litres (220 gallons) shall be divided or have standby tanks to facilitate repairs and maintenance. It should also have a wash out pipe or drain out taps, these to terminate above an outside gully to prevent wastage.

- Tank insulation materials should not suffer permanent structural damage from contact with water generally Phenolic and Polyurethane closed cell foams comply. Where pipe cut outs go through insulation panels, bezels should be fitted to protect the exposed insulation from the ingress of moisture, insects and vermin and preserve the integrity of the insulation with a protective finish.

Types of bolts: Standard Tanks come complete with Bolts galvanised to BS EN ISO 1461:1999, we recommend that Consultants specify Stainless Steel grade 316 S16 bolts under water.

Dividers: In any situation where there is only one water storage tank in a building and the capacity is greater than 1000 litres (220 gallons), BS EN806 states *"To avoid interruption of the water supply when carrying out repairs or maintenance, the cistern shall be provided with compartments or standby cistern"*. Where drinking water is being stored, two separate tanks are recommended as it is difficult to detect cross contamination from one side of a division wall to another.

Condensation trays: They should be used in any instance where condensation, drips from pipe work, or from the tank could cause nuisance damage or render floors wet and slippery.

Ball valve housing: Enclosed chamber containing an access hatch above the level of the cover, permitting the level control mechanism to be mounted at a higher level than would otherwise be possible. The overflow(s) must be placed on the tank side wall and not on the Ball Valve Housing. Water must be kept below tank roof level. This is only necessary where very large ball valves are used.

Ladders: Where tank depth is 1m or greater, internal and external ladders should be specified. If the tank is on a raised platform then ladders may be required on tanks lower than this height. Where the tank is 2m or more from the top of the tank to the finished floor level external ladders should be fitted with safety cages and comply to BS 4211:2005+A1:2008. Additional safety guards maybe required for ladders depending on their location. A risk assessment should be carried out by the end users to determine if this is required.

Guiderail: A guiderail should be fitted enclosing all access points to the tank roof, where a tank is 2m or more from the top of the tank to the finished ground level.

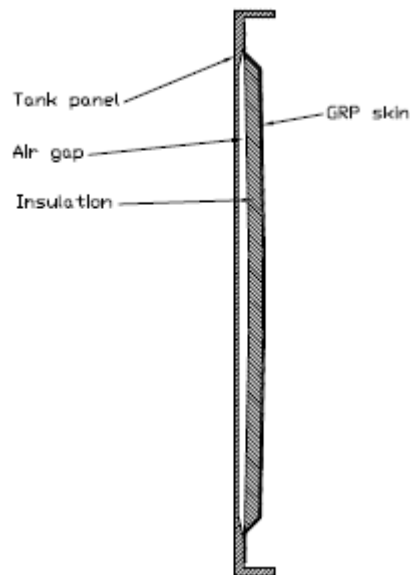
Reverse base tanks: (Externally flanged base) These types of tanks allow the tank to be totally drained down, as the base is flat, they also allow access to all the bolts from outside the tank. 600 mm clearance is required underneath the tank for access to the base bolts.

The client shall ensure that potable water is not stored in tank compartments that are adjacent to compartments storing foul water due to risk of contamination.



TRICEL
GENERATIONS OF INNOVATION

3. Tanks insulated and finished to Format 30

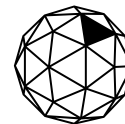


Note: This is an example of one type of insulation skin, there are different arrangements for different types of tanks.

- Current legislation states that water hot or cold, in any premises that might be used for human consumption must be of potable quality.
- In addition to tank material specifications, there are now further requirements for lid design, the screening of vents, breathers, overflows, warning tell-tale pipes and the provision of insulation which will help prevent freezing and also help keep water as cool as practicable, ideally less than 20°C.
- Format 30 is our description of tank with heavy duty panel covers, complete with screened vents, overflows, warning pipes etc and having side wall and roof panels with a (u) value of 2.5 w/m²K, (tanks under 1m high have a slightly higher value). This value meets the requirements of section 30 of the water bye laws in the majority of situations. Tanks in boiler rooms etc may also need base insulation. The purchaser can specify extra requirements or thermal transmittance after considering the period of protection necessary, the tank location and the surrounding conditions. Please Note: Insulation slows down but does not prevent heat loss or gain over protracted periods. Additional information is available in BS EN 13280:2001.



4150 x 4150 x 1500mm 24,000 Litre water tank insulated to F30



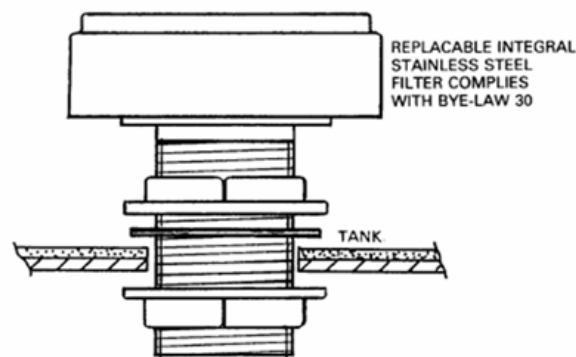
TRICEL
GENERATIONS OF INNOVATION

4. Format 30 fittings

4.1 Screened air inlet vent

A screened air inlet vent must be fitted to the lid in every Format 30 Tank, the hole for the vent will be pre-drilled in the lid panel. Larger tanks may require more than one vent.

Note: During commissioning the air inlet vent should be checked to ensure that it is attached correctly to the tank. Additional air inlet vents may be required pending on water flow rates in and out of tank, i.e. high flow rate in or out of the tank an additional air inlet vent is required to prevent pressurisation or a vacuum forming in the tank.

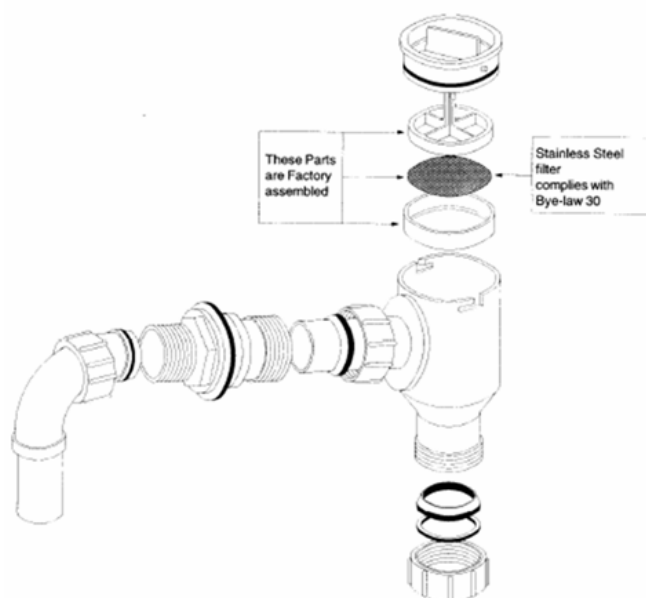


4.2 Screened overflow

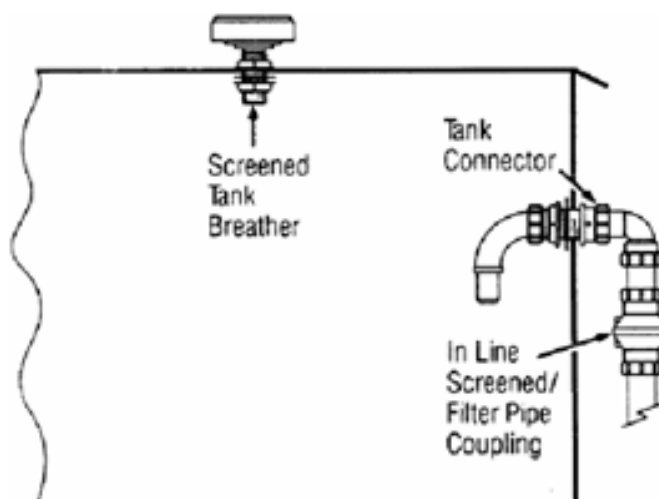
A 1 ½" screened overflow is supplied with each Format 30 tank. Please contact us if a different size is required. These are not fitted by Tricel (Killarney) Unlimited Company.

Please note that overflows larger than 1½" have a different configuration.

Warning or tell-tale pipes if specified must also be screened.



Bylaw 30 fittings



The tank overflow should be twice the cross section area of the inlet

5. Side access hatch



TRICEL
GENERATIONS OF INNOVATION

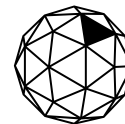


The Side access hatch has an opening of 600mm x 600mm. The side access hatch is a useful choice when there are height restrictions on site. It also provides easier access to the inside of a tank, particularly when there is restricted space above the tank.

The side access hatch comprises of three main components: panel, flange and flat hatch sheet. To open the hatch, the flat hatch sheet is simply unbolted from the flange. It can only be opened when the water level inside the tank is lower than the access hatch.

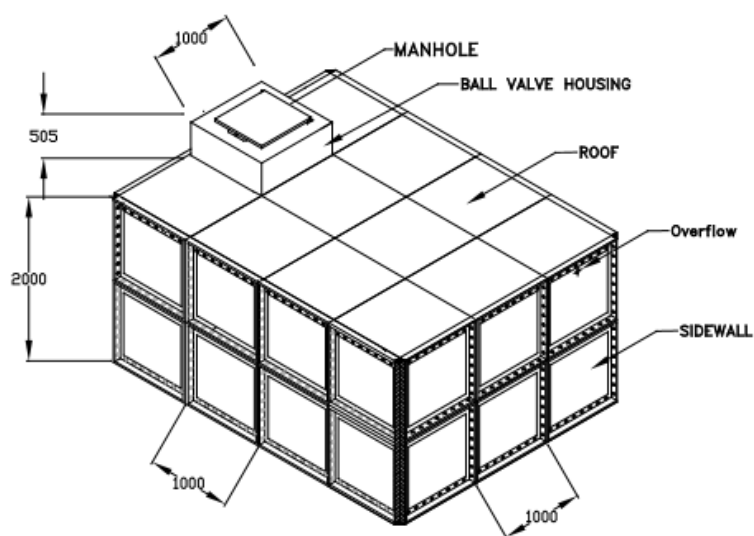
This Access Hatch was designed so that both the head of the bolt and the nut are accessible. This allows a wrench to be placed on the bolt head as well as the nut and prevents a scenario of the bolt simply spinning without opening.

Please note that the 'tank sealant' between the flat access sheet and the will need to be in good condition or replaced, prior to the reattachment of the flat access hatch.



TRICEL
GENERATIONS OF INNOVATION

6. Ball valve housing



Note: All dimensions are in mm

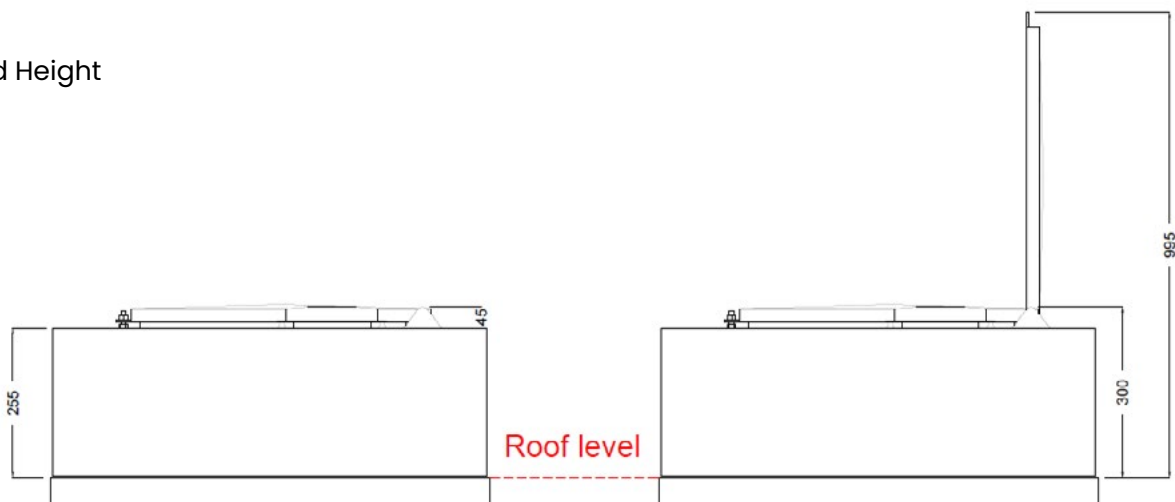
Isometric view of a ball valve housing on a 4000 x 3000 x 2000 mm sectional cold water storage tank. A ball valve housing is an enclosed chamber containing an access hatch above the level of the cover, which leaves space for larger ball floats to raise up and shut off the water supply.

6.1. Ball valve housing specification

Standard Housing



Reduced Height



Specification

External Dimensions: 1000 x 1000 x 560 mm high

Space required: 1201 mm clearance space is required above the roof of the tank, i.e.

For a 2m high tank the room needs to be 3201 mm high.

For tanks with roof height restrictions a lift off lid is also available*

Note: The overflow(s) must be placed on the tank side wall and not on the ball valve housing. Water must be kept below tank roof level.

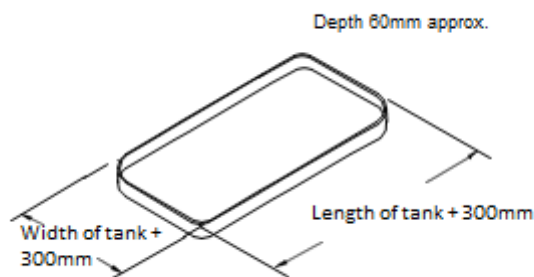
*Site assessment by end user needs to be completed as adequate access is required to tank for maintenance. Refer to Base Details/Design Considerations on page 14 for access guidelines.

7. Condensation tray

We manufacture condensation trays to suit all sizes of Water Storage Tanks. Condensation Trays should be used in any instance where condensation, drips from pipe work or from the tank could cause nuisance damage or render floors wet and slippery.

For sectional cold water storage tanks, the tray extends round the tank by 150 mm. i.e. a sectional tank with external dimensions 4150 x 3150 mm will have a tray approximately 4300 x 3300 mm.

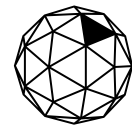
Trays for large sectional tanks are joined on site.



Condensation trays should be water tested at time of testing tank.

A condensation tray is not a substitute for a bund wall or for tanking out a room.

APPROPRIATE OVERFLOWS MUST BE FITTED AS CLOSE AS POSSIBLE TO THE BASE OF THE DRIP TRAY. THESE MUST BE FITTED BEFORE THE TANK IS FILLED. TRAYS ARE DESIGNED TO HOLD A MAXIMUM OF 25MM OF WATER.



TRICEL
GENERATIONS OF INNOVATION

8. Tank divisions

In any situation where there is only one water storage tank in a building and the capacity is greater than 1000 litres (220 gallons), BS EN806, states *"To avoid interruption of the water supply when carrying out repairs or maintenance, the cistern shall be provided with compartments or standby cistern"*. Where drinking water is being stored, two separate tanks are recommended as it is difficult to detect cross contamination from one side of a division wall to another.

Offset and 50:50 division options are available. We can also supply weirs and baffles if required.

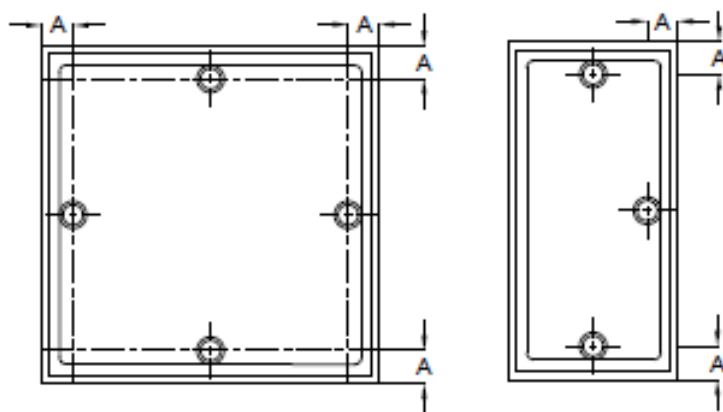
8.1 Maintenance on tanks with dividers

Extra care should be taken during the maintenance of tanks with divisions as maintenance staff will be working in an enclosed space, adjacent to a large volume of water in relation to the size of the space. (See Health & Safety Act).

9. Pipe Connections for cold water storage tanks

- If the tank is to be drained down at a fast rate or by pumps etc, we should be contacted so that adequate vents can be placed on the tank. The standard vent is 2"
- Connections of 100mm (4") nominal bore or over require studed flange pads to suit BS1962, table D&E flanges for pipework connections
- Connections below 100mm (4") nominal bore may be made by cutting holes in situ. First determine whether single or double sided connections are required and cut hole in panel to suit external pipe diameter.
- For connections over 50mm (2") nominal bore use two flanges screwed BS21 taper thread, drilled to BS10. Offer one flange to panel concentric with hole and transfer drill bolt holes into panel. Set one flange to external pipe and using appropriate gasket, assemble external flanged pipe using other flange as an internal backing plate. Finally bolt up. 11
- For double sided connections proceed as above, replacing internal flange with the required fitting, e.g. ball valve, strainer basket etc.
- For connections of 50mm (2") nominal bore or less proceed as above or alternatively use threaded flanges or backnuts (with rubber gaskets) on standard longscrow to BS1387.

Table 1 shows holes diameter for in situ pipe fitting and minimum dimensions for the location of connections from panel edges.



Nominal bore diameter (mm/inch)	Nominal hole size (mm/inch)	Dimension A (mm/inch)
12.7 (½)	22	156 (6 ¼)
19	28 (1 31/32)	161 (6 3/8)
25.4 (1)	35 (1 3/8)	167 (6 5/8)
31.7 (1 ¼)	44 (1 31/32)	170 (6 ¾)
38.1 (1 ½)	50 (1 31/32)	177 (7)
50.8 (2)	61 (2 13/32)	186 (7 3/8)
63.5 (2 ½)	78 (3 1/16)	193 (5/8)
76.2 (3)	90 (3 9/16)	202 (8)
89	105 (4 1/8)	212 (8 3/8)

Table: 1

General notes: All pipe work must be self-supporting. If welded or brazed-on flanges are used, all heat must be dissipated before connections are made to the tank. Holes may be cut with normal metal working tools.

Note: These figures only apply to un-insulated tanks

9.1 Pipe connections for insulated cold water storage tanks.

The areas where pipe connections can be made on insulated tanks are more restricted than in standard tanks, the picture below shows a recess in the insulation panel to allow for the pipe connection. Standard insulated tanks come with three insulation panels with recesses. More can be supplied if required. These are generally 190mm diameter. Larger recesses are available if required

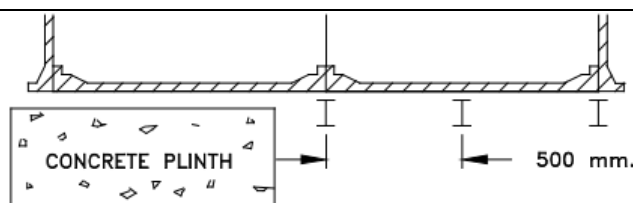




10. Base details/design considerations

10.1 Internally flanged base tank

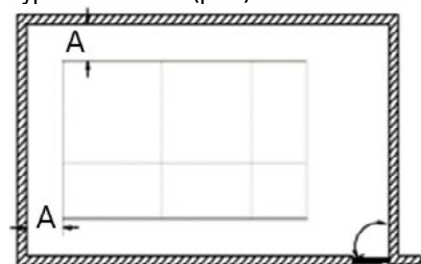
Tanks based on 1m x 1m & 1m x .5m panels



Standard base tanks (internally flanged) may be laid directly on a concrete plinth having a smooth finish, brushed clean and free from any local protuberances. It should be flat, level and not vary more than 6mm in any 6m, measured laterally or diagonally with a maximum variance of 2mm per metre. The plinth must exceed the nominal tank dimensions by a minimum of 200mm

Tanks erected on elevated structures RSJ beams or brick courses in one direction only). Bearers must be at 500mm or 1m centres depending on tank design. Bearer length must exceed nominal tank dimensions by a minimum of 150mm plus any extra for fixings. All bearer walls to be flat and level. For bearer width see chart below

Typical tank room (plan)

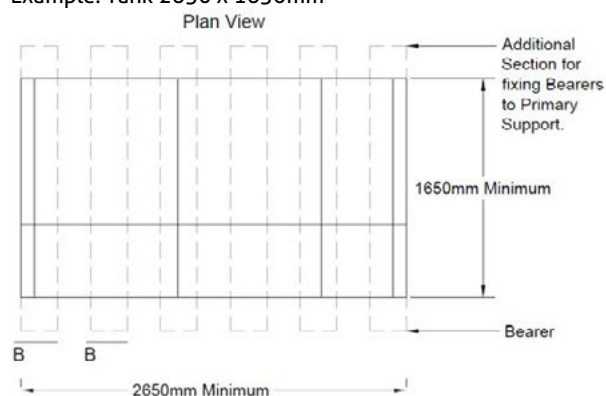


For dimension 'A' see chart below. This clearance should be on all sides of the tank, also a top clearance of 750* mm is required for standard access hatch to open.

Where hooped external ladder(s) and guardrail are fitted, a height clearance of 1200mm above the tank is required. If the tank is pushed closer to any wall after assembly or if the working space is reduced (dimension 'A') at a later stage, by the building of walls etc, responsibility will rest with others.

**This can be reduced to 500mm in accordance with WRAS guidelines where a lift off access hatch is fitted. We must be notified of this prior to tank despatch.*

Example: Tank 2650 x 1650mm



General notes:

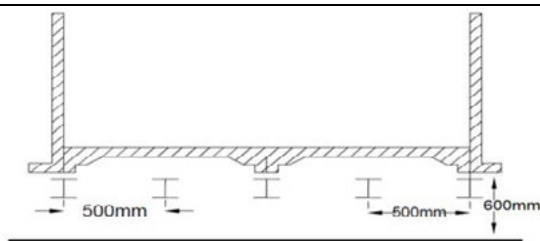
1. Client to design suitable bearers to suit load conditions. Water load = $1000 \text{ kg/m}^3 + 20\%$ for tank.
2. Bearers can run in either direction.
3. Deflection must not exceed $1/500^{\text{th}}$ of the unsupported span of the bearers. The unsupported span can only be in one direction.
4. Adequate overflows should be fitted to prevent the tank from being pressurised.
5. Tanks in exposed places may be susceptible to movement in high winds, especially when empty. These may need to be anchored to the base, this work is to be carried out by others.
6. Weight of the tank does not include the weight of the tank supports.

Working space and bearer width.

Tank height mm	Minimum Working space "A" mm	Bearer Width "B" mm
500	500	75
1000	500	100
1500	500	100
2000	500	150
2500	800	150
3000	800	150
3500	1000	150
4000	1000	150

10.2 Externally flanged base tank

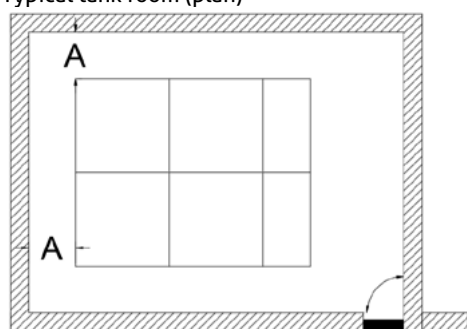
Tanks based on 1m x 1m & 1m x .5m panels



Externally flanged base tanks must be erected on elevated structures RSJ beams or brick courses (in one direction only). A clearance space of 600mm is required below the tank in accordance with BSEN806.

Tanks erected on bearers must be at 500mm or 1m centres depending on tank design. Bearer length must exceed nominal tank dimensions by a minimum of 150mm plus any extra for fixings. All bearer walls to be flat and level. For bearer width see chart below.

Typical tank room (plan)



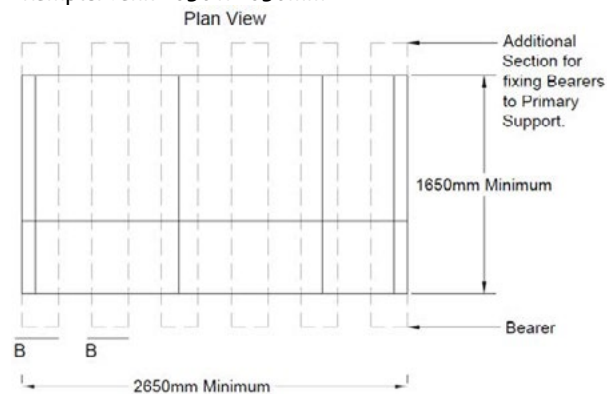
For dimension 'A' see chart below. This clearance should be on all sides of the tank.

A top clearance of 750* mm is required for standard access hatch to open.

Where hooped external ladder(s) and guardrail are fitted, a height clearance of 1200mm above the tank is required. If the tank is pushed closer to any wall after assembly or if the working space is reduced (dimension 'A') at a later stage, by the building of walls etc, responsibility will rest with others.

**This can be reduced to 500mm in accordance with WRAS guidelines where a lift off access hatch is fitted. We must be notified of this prior to tank despatch.*

Example: Tank 2650 x 1650mm



General notes:

1. Client to design suitable bearers to suit load conditions. Water load = $1000 \text{ kg/m}^3 + 20\%$ for tank.
2. Bearers can run in either direction.
3. Deflection must not exceed $1/500^{\text{th}}$ of the unsupported span of the bearers. The unsupported span can only be in one direction.
4. Adequate overflows should be fitted to prevent the tank from being pressurised.
5. Tanks in exposed places may be susceptible to movement in high winds, especially when empty. These may need to be anchored to the base, this work is to be carried out by others.
6. Weight of the tank does not include the weight of the tank supports.

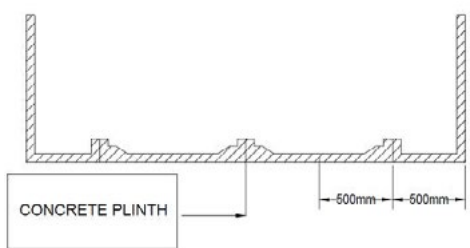
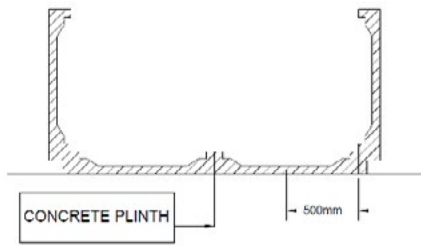
Working space and bearer width.

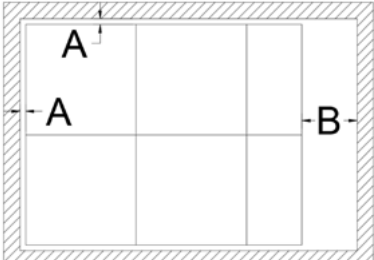
Tank height mm	Minimum Working space "A" mm	Bearer Width "B" mm
500	500	75
1000	500	100
1500	500	100
2000	800	150
2500	800	150
3000	1000	150
3500	1000	150
4000	1000	150

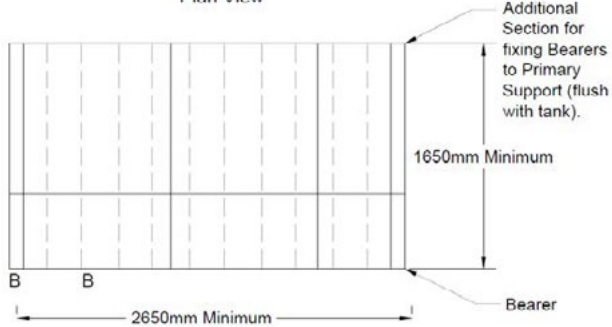
Clearance figures shown above must be provided from **internal** tank dimension

10.3 T.I.F Tanks (Hot Press and HLU)

Tanks based on 1m x 1m & 1m x .5m panels

HLU - TIF	Hotpress TIF
	
T.I.F tanks may be laid directly on a concrete plinth having a smooth finish, brushed clean and free from any local protuberances. It should be flat, level and not vary more than 6mm in any 6m, measured laterally or diagonally with a maximum variance of 2mm per metre.	Tanks erected on elevated structures RSJ beams or brick courses in one direction only). Bearers must be at 500mm or 1m centres depending on tank design. All bearer walls to be flat and level. For bearer width see chart below.

Typical tank room (plan)	
	For dimension 'A' & 'B' see chart below. A top clearance of 750* mm is required for standard access hatch to open. Where hooped external ladder(s) and guardrail are fitted, a height clearance of 1200mm above the tank is required. <i>*This can be reduced to 500mm in accordance with WRAS guidelines where a lift off access hatch is fitted. We must be notified of this prior to tank despatch.</i>

Example: Tank 2650 x 1650mm Plan View	General notes:
	<ol style="list-style-type: none"> Client to design suitable bearers to suit load conditions. Water load = 1000 kg/m³ + 20 % for tank. Bearers can run in either direction. Deflection must not exceed 1/500th of the unsupported span of the bearers. The unsupported span can only be in one direction. Adequate overflows should be fitted to prevent the tank from being pressurised. Tanks in exposed places may be susceptible to movement in high winds, especially when empty. These may need to be anchored to the base, this work is to be carried out by others. Weight of the tank does not include the weight of the tank supports.

Working space and bearer width.

Tank height mm	Minimum Working space "A" mm	Minimum Working space "B" mm	Bearer Width "B" mm
500	50	500	75
1000	50	500	100
1500	50	500	100
2000	50	500	150
2500	50	500	150
3000	50	500	150
3500	50	500	150
4000	50	500	150

Clearance figures shown above must be provided from **external** tank dimension

11. Maintenance recommendations for sectional water storage tanks

In accordance with the "The control of legionella bacteria in water systems. Approved Code of Practice and guidance" (L8) – 2000, (see Appendix I) if there is a reasonable foreseeable risk of exposure to legionella bacteria then water tank temperatures need to be taken by competently trained personnel, recorded in a logbook and kept for 5 years.

Do not stand on internal stays while maintenance is being carried out.

Maintenance interval: Annually

Check list

1. In accordance with the "The control of Legionella bacteria in water systems. Approved Code of Practice and Guidance" (L8) – 2000, (see Appendix). If there is a reasonable foreseeable risk of exposure to legionella bacteria then water tank temperatures need to be taken by competently trained personnel, recorded in a logbook and kept for 5 years.
2. Do not stand on internal stays while maintenance is being carried out.
3. All internal supports should be checked for corrosion, if corrosion is found it should be rectified immediately.
4. Check generally for leaks or drips. If there a weep from a bolt or the seal, it may be rectified by tightening the bolts in a systematic order to a torque of 40Nm/30ft lb. Only calibrated torque should be used for this task. If the leak is at an external flange, torque the bolts around the leak. Start four bolts away from the leak, work over to the leak and then go to the fourth bolt on the opposite side and torque back to the leak. If the leak is at a joint between four panels, this procedure will be repeated in the opposite direction i.e. torque the vertical flange first and then the horizontal.
5. Check that all pipe work connected to the tank is suitably braced.
6. Check ball valve armature pins for corrosion.
7. When cleaning the inside of the tank, do not interfere with the joint seals.
8. When cleaning the tank do not overfill or pressurize the tank.
9. Check that overflows are fitted and sized correctly. Check the overflow(s) and the air inlet screens vent(s). Ensure that they are not blocked. The overflow should be twice the cross-section area of the inlet.
10. If insulated check that insulation and the manhole is securely fixed and not damaged, if they are damaged then the tank is not in compliance with Byelaw 30.
11. If not insulated in accordance with Byelaw 30, ensure that people cannot consume water from the tank. We can advise on upgrading the tank to Byelaw 30 standard.
12. If there is a condensation tray with the tank, ensure that it has an overflow fitted and that it's not damaged.
13. If there are ladders fitted to the tank, ensure that they have not been damaged and are securely fastened to the tank.
14. If the area underneath / adjacent to the tank has become water sensitive check that the tank room is bunded with adequate escape ducts.
15. If the tank room is bunded, check that it is in good condition.
16. With tanks for drinking water, check that the water surface is clean and shiny and that the water doesn't contain any debris or contamination.
17. Check for evidence of stagnation of the water.

18. Check for excessive build-up of sediment.
19. Check for presence of algae, biofilm.
20. Check for scaling of the tank sidewalls.
21. The cold-water storage tank should be cleaned, disinfected and faults rectified, if considered necessary.
22. After maintenance of the tank is complete, ensure that the manhole seal is intact and the manhole is securely closed.

Maintenance on tanks with dividers

Extra care should be taken during the maintenance of tanks with divisions, as maintenance staff will be working in an enclosed space, adjacent to a large volume of water in relation to the size of the space. (See Health & Safety Act).

Note:

- Further information on the Health & Safety aspect, reference water quality is available in BS EN 806 & BS 8558.
- Legal. (L8)(L8) supersedes earlier editions and guidance published with ISBNs 0118821504, 0717604519, 0717607321 (HSG70)(HSG 70)(HS G 70) entitled, 'The control of legionellosis including Legionnaires' disease'. It also replaces guidance note environmental health 48. (GNEH48)(GNEH 48)(GN EH48) (GN EH 48) ISBN 011883939X supplemented by MISC150 (MISC 150) entitled, 'The control of legionellosis in hot and cold water systems'.

Appendix I

This approved code of practice and guidance gives practical advice on the requirements of the Health and Safety at Work etc Act 1974, and the Control of Substances Hazardous to Health 1999, concerning the risk from exposure to legionella bacteria. The Code also gives guidance on compliance with the relevant parts of the Management of Health and Safety at Work Regulations 1999.

Contents: Notice of approval; Acknowledgements; Introduction; Part 1: The approved code of practice; Scope and application; Identification and assessment of the risk; Managing the risk: management responsibilities, training and competence; Preventing or controlling the risk from exposure to legionella bacteria; Record keeping; Responsibilities of manufacturers, importers, suppliers and installers; Part 2: Guidance on the control of legionella in water systems; Cooling 18 systems; Management of cooling towers; Treatment program's; Monitoring; Cleaning and disinfection; Hot and cold water services; Design and construction; Management of hot and cold water systems; Treatment and control program's; General monitoring; Cleaning and disinfection; Other risk systems; Protection of personnel; Appendix 1 Recommended inspection frequencies for risk systems; Appendix 2 Action in the event of an outbreak; Glossary; References and further reading.

12. Glossary of terms



Sectional tank: Rectangular fixed container assembled from panels for the storage of water at atmospheric pressure and at a maximum temperature of 30°C.

Note: This temperature is higher than is acceptable for drinking water, which should not normally exceed 20°C.

Nominal capacity: Volume contained in a tank, measured up to the top edge of the side walls.

Actual capacity: Volume contained in the tank up to the maximum working level, this can be between 10 and 50% less than the nominal capacity depending on the size of the tank.

Bund wall: Structure situated underneath water tanks. It's purpose is to protect the building from water damage. All water tanks located above areas that are water sensitive should be banded.

Ball valve housing: Enclosed chamber containing an access hatch above the level of the cover, permitting the level control mechanism to be mounted at a higher level than would otherwise be possible.

Vent: Opening to the atmosphere to allow for the movement of air resulting from changes in the water level so that the water always remains at atmospheric pressure.

Warning pipe: Pipe so fixed that it's outlet, whether inside or outside a building, is in a conspicuous position where the discharge of water can be readily seen.

Overflow pipe: Pipe connected to the tank to discharge any overflow therefrom.

Division plate: Construction of one or more panels within a tank which divides the tank into two separate compartments.

Note: In any situation where there is only one water storage tank in a building, it is to be recommend that a weir or a division plate be used. This will facilitate maintenance of the tank without effecting the water supply to the building.

Weir: Construction of one or more panels within a tank, which divides the tank but to less than its full depth such that the contents can spill over from one side of the weir to the other.

Baffle: Construction of one or more panels within a tank, which partially subdivides the tank in order to increase the length of the flowpath between the inlet and the outlet from the tank.

Leakage test: The duration of the test should be a minimum of 24 hours, commencing at least 2 hours after the tank has been filled. The test shall be carried out within 10 days of erection unless the manufacturer agrees to a longer period after assembly. The tank should be inspected at regular intervals and not deserted during commissioning (first filling with water). The leakage test is not carried out by Tricel (Killarney) Unlimited Company

BS EN 13280:2001. Specification for glass fibre reinforced plastics cisterns for one piece and sectional construction, for the storage, above ground, of cold water.

BS 6700:1997: Specification for design, installation, testing and maintenance of services supplying water for domestic use within building and their curtilages.

Disclaimer of liability

The material and information contained herein is for general information purposes only. You should not rely upon the material or information as a basis for making any business, legal or any other decisions.

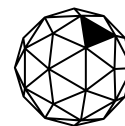
Whilst we endeavour to keep the information up to date and correct, Tricel (Killarney) Unlimited Company makes no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability or availability with respect to the information, products or services contained herein for any purpose. Any reliance you place on such material is therefore strictly at your own risk.

In accordance with Tricel (Killarney) Unlimited Company, normal policy of product development, this specification is subject to change without notice.

Note: Tricel (Killarney) Unlimited Company believe that the information contained in this brochure is accurate, and is printed for information only. No warrants, express or implied, are contained therein, nor does any legal liability attach to Tricel (Killarney) Unlimited Company for any reason whatsoever. Property rights of the subject belong to Tricel (Killarney) Unlimited Company, and transfer of these rights is not granted by possession of this document.

Oct 19

13. Sample tank log book



TRICEL
GENERATIONS OF INNOVATION

Date of first tank inspection: Inspection carried out by:

All maintenance items checked: Yes ☐ No ☐

Action taken on tank:

.....

.....

Action required:

.....

.....

Comments:

.....

.....

Print Name: Signed:

.....

Date of first tank inspection: Inspection carried out by:

All maintenance items checked: Yes ☐ No ☐

Action taken on tank:

.....

.....

Action required:

.....

.....

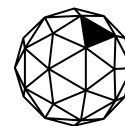
Comments:

.....

.....

Print Name: Signed:

13. Sample tank log book



TRICEL
GENERATIONS OF INNOVATION

Date of first tank inspection: Inspection carried out by:

All maintenance items checked: Yes ☐ No ☐

Action taken on tank:

.....

Action required:

.....

Comments:

.....

Print Name: Signed:

.....

1026636 Rev. 1



Please note: Insulation slows down, but does not prevent heat loss or heat gain, over protracted periods.
Additional information is available in BS 7491 & BS 6700.

Tricel (Killarney) Unlimited Company, Ballyspillane Industrial Estate, Killarney, Co. Kerry, Ireland.

Tel: +353 (0) 64 6632421 | Email: watersales@tricel.ie | www.tricelwater.ie

In accordance with Tricel's normal policy of product development these specifications are subject to change without notice.